DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT CORPS OF ENGINEERS
2170 SW Canal Street
Stuart, FL 34997

REPLY TO
ATTENTION OF

0 2 APR 2008

Regulatory Division
Special Projects and Enforcement Branch
SAJ-2007-3622(IP-AAZ)

Florida Department of Transportation
Attn: Mr. John Palenchar
1000 NW 111th Avenue, Room 6101
Miami, Florida 33172

Dear Mr. Palenchar:

The U.S. Army Corps of Engineers (Corps) is pleased to enclose the Department of the Army permit, which should be available at the construction site. Work may begin immediately but the Corps must be notified of:

a. The date of commencement of the work,

b. The dates of work suspensions and resumptions of work, if suspended over a week, and

c. The date of final completion.

This information should be mailed to the Enforcement Section of the Regulatory Division of the Jacksonville District at Post Office Box 4970, Jacksonville, Florida 32232-0019. The Enforcement Section is also responsible for inspections to determine whether Permittees have strictly adhered to permit conditions.

IT IS NOT LAWFUL TO DEVIATE FROM THE APPROVED PLANS ENCLOSED.

Sincerely,

Alisa Barco

David S. Hobbie
Chief, Regulatory Division

DEPARTMENT OF THE ARMY PERMIT

Permittee: Florida Department of Transportation
Attn: Mr. John Palenchar
1000 NW 111th Avenue, Room 6101
Miami, FL 33172

Permit No: SAJ-2007-3622(IP-AAZ)

Issuing Office: U.S. Army Engineer District, Jacksonville

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee or any future transferee. The term "this office" refers to the appropriate district or division office of the Corps of Engineers having jurisdiction over the permitted activity or the appropriate official of that office acting under the authority of the commanding officer.

You are authorized to perform work in accordance with the terms and conditions specified below.

Project Description: The project would stabilize the shoreline along SR5/US1 in the Florida Keys. The shoreline has been damaged after Hurricane Wilma. All work is to be performed from the uplands. The total proposed wetland impacts are system. In areas where the restoration activities would occur below the mean high water line, rubble riprap would be placed during low tide events to minimize potential for turbidity. Where no impacts to wetlands would occur, precaution would be taken to avoid impacts/minimize disturbance to existing native upland vegetation. As a result of the project, approximately 0.56 acres consisting of a fringing coastal/mangrove wetlands would be impacted. As mitigation for the impacts, the applicant is proposing offsite mitigation consisting of 0.93 acres of mangrove creation area on a 9.2-acre property located at MM 24.5 on Summerland Key. The work described above is to be completed in accordance with the drawings affixed at the end of this permit instrument.

Project Location: The proposed project is located in waters of the United States adjacent to State Road 5(SR5)/US1/Overseas Highway from mile marker (MM) 5.56 to MM 90.9 in the Florida Keys, Monroe County, Florida.

The project sites and the latitude and longitude coordinates are as follows:

MM 5.56 Key Haven Boulevard/Stock Island
Section Township Range NA
Latitude 24.56667N Longitude -80.73861W

MM 10.78 Shark Channel
Section 23, Township 67S, Range 26E
Latitude 24.60027N Longitude -81.64976W

MM 15.8 Low Sugarloaf Channel
Section Township Range NA
Latitude 24.56667N Longitude -80.73861W

MM 5.56 Key Haven Boulevard/Stock Island
Section Township Range NA
Latitude 24.63178N Longitude -81.58863W

MM 19.1 Upper Sugarloaf Sound/Crane Boulevard
Section 36, Township 66S, Range 27E
Latitude 24.6562N Longitude -81.53526W

MM 46.9 Knight Key Channel
Section 8, Township 66S, Range 32E
Latitude 24.70744N Longitude -81.12017W

MM 57.7 Grassy Key
Section 25, Township 66S, Range 33E
Latitude 24.75568N Longitude -80.95979W

MM 79.13 Teatable Key Channel
Section Township Range NA
Latitude 24.89385N Longitude -79.33238W

MM 90.9 Tavernier Creek
Section 33, Township 62S, Range 38E
Latitude 24.00254N Longitude -80.52955W

Directions to site: Travel to the southern end of the Florida's Turnpike, then south onto US1. Travel south on US1 to the Florida Keys.

Permit Conditions

General Conditions:

1. The time limit for completing the work authorized ends on **27 March 2013**. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and State coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature and the mailing address of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

Special Conditions:

1. **Reporting Address**: All reports, documentation and correspondence required by the conditions of this permit shall be submitted to the following address: U.S. Army Corps of Engineers, Regulatory Division, Enforcement Section, P.O. Box 4970, Jacksonville, FL 32232. The Permittee shall reference this permit number, SAJ-1996-3984(IP-AAZ), on all submittals.

2. **Commencement Notification:** Within 10 days from the date of initiating the authorized work, the Permittee shall provide to the Corps a written notification of the date of commencement of work authorized by this permit.

3. **Erosion Control:** Prior to the initiation of any work authorized by this permit, the Permittee shall install erosion control measures along the perimeter of all work areas to prevent the displacement of fill material. Immediately after completion of the final grading of the land surface, all slopes, land surfaces, and filled areas adjacent to wetlands shall be stabilized using sod, degradable mats, or a combination of similar stabilizing materials to prevent erosion. The erosion control measures shall remain in place and be maintained until all authorized work has been completed and the site has been stabilized.

4. **As-Builts:** Within 60 days of completion of the authorized work or at the expiration of the construction window of this permit, whichever occurs first, the Permittee shall submit as-built drawings of the authorized work and a completed As-Built Certification Form (Attachment 2) to the Corps. The drawings shall be signed and sealed by a registered professional engineer and include the following:

(a) A plan view drawing of the location of the authorized work footprint (as shown on the permit drawings) with an overlay of the work as constructed in the same scale as the attached permit drawings (8½-inch by 11-inch). The drawing should show all "earth disturbance," including wetland impacts, water management structures, and any on-site mitigation areas.

(b) List any deviations between the work authorized by this permit and the work as constructed. In the event that the completed work deviates, in any manner, from the authorized work, describe on the As-Built Certification Form the deviations between the work authorized by this permit and the work as constructed. Clearly indicate on the as-built drawings any deviations that have been listed. Please note that the depiction and/or description of any deviations on the drawings and/or As-Built Certification Form does not constitute approval of any deviations by the U.S. Army Corps of Engineers.

(c) The Department of the Army Permit number.

(d) Include pre- and post-construction aerial photographs of the project site, if available.

5. **Fill Material:**

(a) The Permittee shall use only clean fill material for this project. The fill material shall be free from items such as trash, debris, automotive parts, asphalt, construction materials, concrete block with exposed reinforcement bars, and soils contaminated with any toxic substance, in toxic amounts in accordance with Section 307 of the Clean Water Act.

(b) The dredged spoil material and associated effluent shall be pumped to a self-contained temporary, bermed upland disposal site.

6. **Endangered Species:** The permittee agrees to abide by the enclosed Sea Turtle and Smalltooth Sawfish Construction Guidelines dated March 23, 2006.

7. **Compensatory Mitigation:** Within 6 months from the from the date of initiating the authorized work or 12 months from the effective date of this permit, whichever first occurs, the Permittee shall complete the following mitigation objectives in accordance with the approved compensatory mitigation plan titled *Florida Department of Transportation US 1/SR-5 hurricane Erosion Repair Project Mitigation Plan*.

(a) Offsite Mitigation for Wetland Creation: Remove fill from 0.93 acres of upland spoil and plant with a 50/50 mixture of red and black mangroves. The mangroves will be no less than one year old and planted on three foot centers. It is estimated that approximately 4,800 mangroves would be planted

These offsite compensatory mitigation areas shall be preserved in perpetuity in accordance with the **Conservation Easement** Special Condition of this permit.

8. **Performance Standards:** To meet the objectives of the approved compensatory mitigation plan, the Permittee shall achieve the following performance standards:

(a) At least 80 percent cover by appropriate wetland species (i.e., FAC or wetter).

(b) Less than 5 percent cover of Category I and II invasive exotic plant species, pursuant to the most current list established by the Florida Exotic Pest Plant Council at http://www.fleppc.org and by the Florida Keys Invasive Exotic Task Force at http://www.keysgreenthumb.net/exotics list.pdf. The plant species shall include but are not limited to the nuisance species primrose willow (Ludwigia peruviana), dog fennel (*Eupatorium capillifolium*), Bermuda grass (*Cynodon spp.*), Bahia grass (*Paspalum notatum*), cattail (*Typha spp.*), Brazilian pepper (*Schinus terebinthifolius*), Australian pine (*Casuarina equisetifolia*), Seaside Mahoe (*Thespesia populnea*), Lead Tree (*Leucaena leucocephala*), and non-native Sceavola (*Scaevola sericea*).

(c) Less than 20 percent mortality of planted wetland species.

(d) Hydrologic enhancement will result in soils that are saturated to the surface between 5 and 12.5 percent of the growing season.

The Permittee shall achieve the above performance standards by the end of the 5-year monitoring period, with no maintenance during the 5th year of monitoring. In the event that the above performance standards have not been achieved, the Permittee shall undertake a remediation program approved by the Corps in accordance with the **Remediation** Special Condition of this permit.

9. **Monitoring and Reporting Timeframes:** To show compliance with the performance standards the Permittee shall complete the following:

(a) Perform a time-zero monitoring event of the wetland mitigation area(s) within 60 days of completion of the compensatory mitigation objectives identified in the **Compensatory Mitigation** Special Condition of this permit.

(b) Submit the time-zero report to the Corps within 60 days of completion of the monitoring event. The report will include a paragraph depicting baseline conditions of the mitigation site(s) prior to initiation of the compensatory mitigation objectives and a detailed plan view drawing of all created, enhanced and/or restored mitigation areas.

(c) Subsequent to completion of the compensatory mitigation objectives, perform semi-annual monitoring of the wetland mitigation areas for the first 3 years and annual monitoring thereafter for a total of no less than 5 years of monitoring.

(d) Submit annual monitoring reports to the Corps within 60 days of completion of the monitoring event. Semi-annual monitoring will be combined into one annual monitoring report.

(e) Monitor the mitigation area(s) and submit annual monitoring reports to the Corps until released in accordance with the **Mitigation Release** Special Condition of this permit.

10. **Reporting Format:** Annual monitoring reports shall follow a 10-page maximum report format for assessing compensatory mitigation sites. The Permittee shall submit all documentation to the Corps on 8½-inch by 11-inch paper, and include the following:

(a) Project Overview (1 Page):

(1) Department of the Army Permit Number

(2) Name and contact information of Permittee and consultant

(3) Name of party responsible for conducting the monitoring and the date(s) the inspection was conducted

(4) A summary paragraph defining the purpose for the approved project, acreage and type of aquatic resources impacted, and mitigation acreage and type of aquatic resources authorized to compensate for the aquatic impacts

(5) Written description on the location and any identifiable information to locate the site perimeter(s)

(6) Directions to the mitigation site (from a major highway)

(7) Dates compensatory mitigation commenced and/or was completed

(8) Short statement on whether the performance standards are being met

(9) Dates of any recent corrective or maintenance activities conducted since the previous report submission

(10) Specific recommendations for any additional corrective or remedial actions.

(b) Requirements (1 page): List the monitoring requirements and performance standards, as specified in the approved mitigation plan and special conditions of this permit, and evaluate whether the compensatory mitigation project site is successfully achieving the approved performance standards or trending towards success.

(c) Summary Data (maximum of 4 pages): Data shall be provided to substantiate the success and/or potential challenges associated with the compensatory mitigation project. Any photo documentation shall be dated and clearly labeled with the direction from which the photo was taken, and be identified on the appropriate maps.

(d) Maps (maximum of 3 pages): Maps shall be provided to show the location of the compensatory mitigation site relative to other landscape features, habitat types, locations of photographic reference points, transects, sampling data points, and/or other features pertinent to the mitigation plan.

(e) Conclusions (1 page): A general statement shall be included describing the conditions of the compensatory mitigation project. If performance standards are not being met, a brief explanation of the difficulties and potential remedial actions proposed by the Permittee, including a timetable, shall be provided.

11. **Remediation:** If the compensatory mitigation fails to meet the performance standards 5 years after completion of the compensatory mitigation objectives, the compensatory mitigation will be deemed unsuccessful. Within 60 days of notification by the Corps that the compensatory mitigation is unsuccessful, the Permittee shall submit to the Corps an alternate compensatory mitigation proposal to fully offset the functional loss that occurred as a result of the project. The alternate compensatory mitigation proposal may be required to include additional

mitigation to compensate for the temporal loss of wetland function associated with the unsuccessful compensatory mitigation activities. The Corps reserves the right to fully evaluate, amend, and approve or reject the alternate compensatory mitigation proposal. Within 120 days of Corps approval, the Permittee will complete the alternate compensatory mitigation proposal.

12. **Mitigation Release:** The Permittee's responsibility to complete the required compensatory mitigation, as set forth in the **Compensatory Mitigation** Special Condition of this permit will not be considered fulfilled until mitigation success has been demonstrated and written verification has been provided by the Corps. A mitigation area which has been released will require no further monitoring or reporting by the Permittee; however the Permittee, Successors and subsequent Transferees remain perpetually responsible to ensure that the mitigation area(s) remain in a condition appropriate to offset the authorized impacts in accordance with General Condition 2 of this permit.

13. **Conservation Easement:** The Permittee shall preserve 0.93 acres of wetlands in perpetuity by recording a conservation easement within the boundaries and location annotated on the attached Mitigation Plan, and in accordance with procedures outlined in Special Condition No. 21 of the attached South Florida Water Management District (SFWMD) permit and the following conditions:

(1) Within 30 days from the date of initiating the authorized work or 12 months from the effective date of this permit, whichever first occurs, the Permittee shall submit to the Corps a copy of the recorded conservation easement document with exhibits (including legal description and sketch).

(2) Any deviation from the established conservation easement cannot be performed without a modification to this permit instrument. The ability to modify or remove this conservation easement is neither implied nor guaranteed. If the conservation easement is removed for any reason, the Permittee shall provide appropriate mitigation to compensate for functional wetland loss.

14. The permittee shall comply with the 35 Specific Conditions of the South Florida Water Management District permit number permit #44-00390-P that was issued on March 20, 2008.

Further Information:

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to:

(X) Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403).

(X) Section 404 of the Clean Water Act (33 U.S.C. 1344).

( ) Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972(33 U.S.C. 1413).

2. Limits of this authorization.

a. This permit does not obviate the need to obtain other Federal, State, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed Federal projects.

3. Limits of Federal Liability. In issuing this permit, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. You fail to comply with the terms and conditions of this permit.

b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions: General Condition 1 establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Your signature below, as permittee, indicates that you accept and agree to comply with the terms and conditions of this permit.

(PERMITTEE) 3/28/2008
(DATE)
Mr. John Palenchar
Florida Department of Transportation, District 6

JOHN PALENCHAR
(PERMITTEE NAME-PRINTED)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army, has signed below.

BY Alisa Zarbo 4/2/2008
(DISTRICT ENGINEER) (DATE)
Paul L. Grosskruger
Colonel, U.S. Army

When the structures or work authorized by this permit are still in existence at the time the property is transferred, the terms and conditions of this permit will continue to be binding on the new owner(s) of the property. To validate the transfer of this permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

_____ _____

(TRANSFEREE-SIGNATURE) (DATE)

_____

(NAME-PRINTED)

_____

(ADDRESS)

_____

(CITY, STATE, AND ZIP CODE)

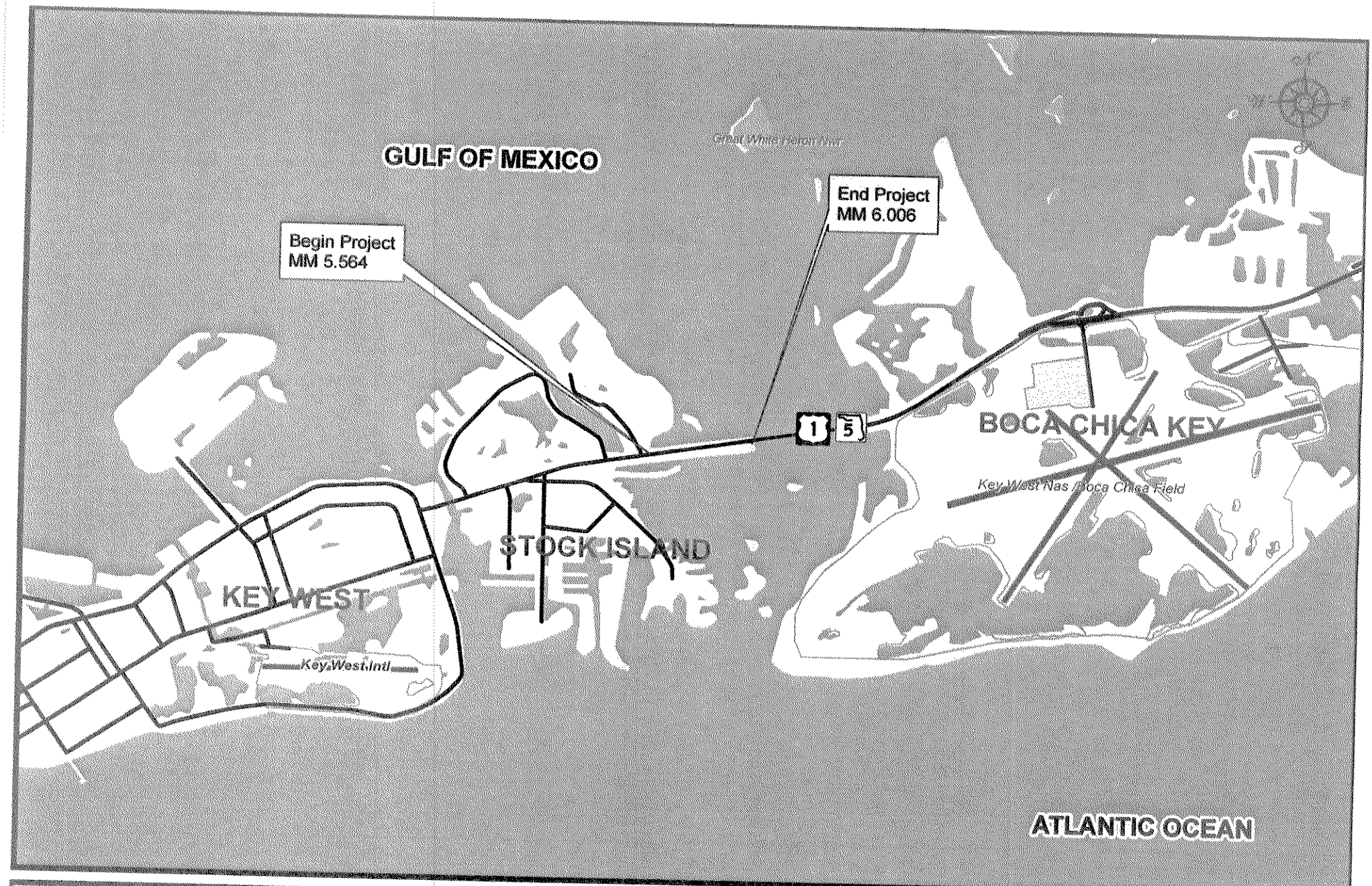
Attachments to Department of the Army Permit Number SAJ-2007-3622(IP-AAZ)

1. PERMIT DRAWINGS: Sixteen (16) pages

2. FLORIDA DEPARTMENT OF TRANSPORTATION US 1/SR-5 HURRICANE EROSION REPAIR PROJECT MITIGATION PLAN: Thirty-five (35) pages

3. WATER QUALITY CERTIFICATION: Specific Conditions of the water quality permit/certification in accordance with General Condition number 5 on page 2 of this DA permit.

4. SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION GUIDELINES: One (1) page dated March 23, 2006



Keys Shoreline Restoration / Stabilization Projects
From MM 5.564 to MM 6.006 - Key Haven Road / Stock Island
Financial Project ID: 421240-1-52-01
Monroe County, FL
Sources- Florida Geographic Data Library & Street Map USA

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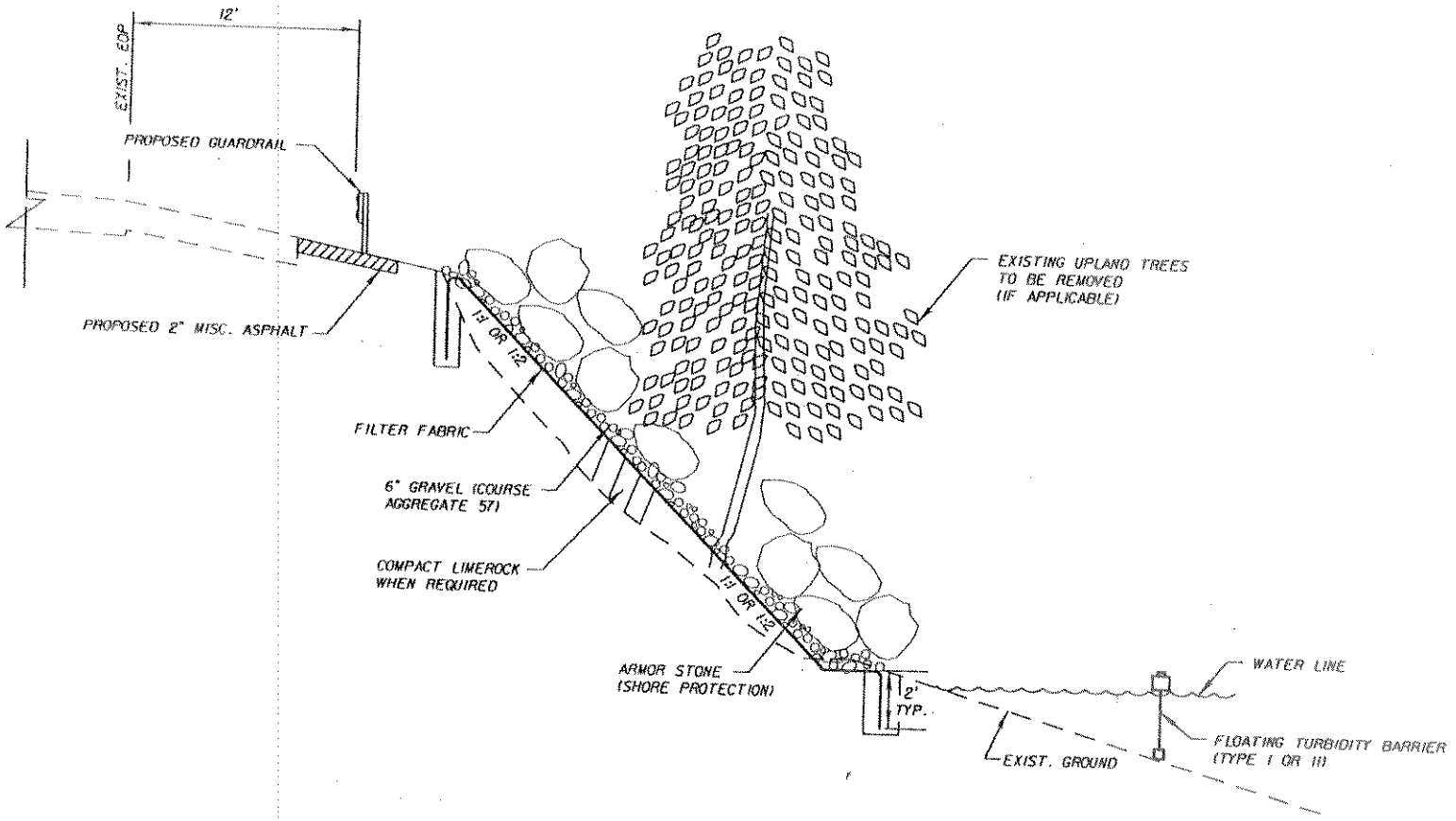
PROJECT LOCATION MAP

FIGURE - 1



DETAIL "A"

NOTE:
NO WETLAND VEGETATION (I.E. MANGROVES) WILL BE REMOVED / IMPACTED.

LEGEND

FABRIC-FORMED CONC. RIPRAP | RUBBLE RIPRAP | MISC. ASPHALT PAVT. | SOD | EMBANKMENT

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

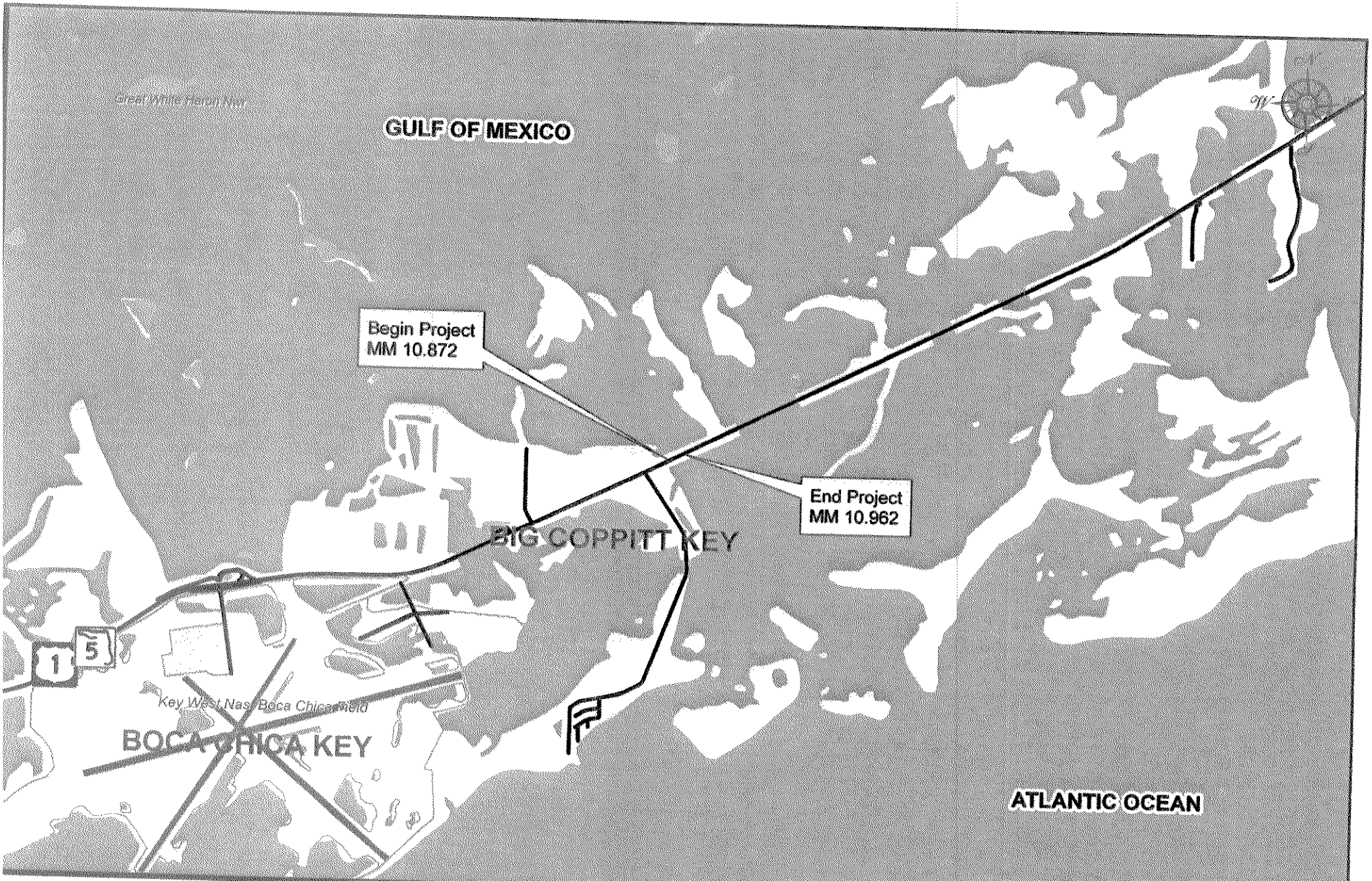
DMJM HARRIS | AECOM
800 DOUGLAS ROAD, SUITE 170
CORAL GABLES, FL 33134
TEL: (305) 441-6864
FAX: (305) 441-4306
FLORIDA CERT. NO. 00000036
ALEJANDRO D. BEITIA, P.E.
PE LICENSE NO. 41194

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

TYPICAL SECTION

SHEET NO.



Keys Shoreline Restoration / Stabilization Projects
From MM 10.872 to MM 10.962 - Shark Channel
Financial Project ID: 419828-1-52-01
Monroe County, FL
Sources- Florida Geographic Data Library & Street Map USA

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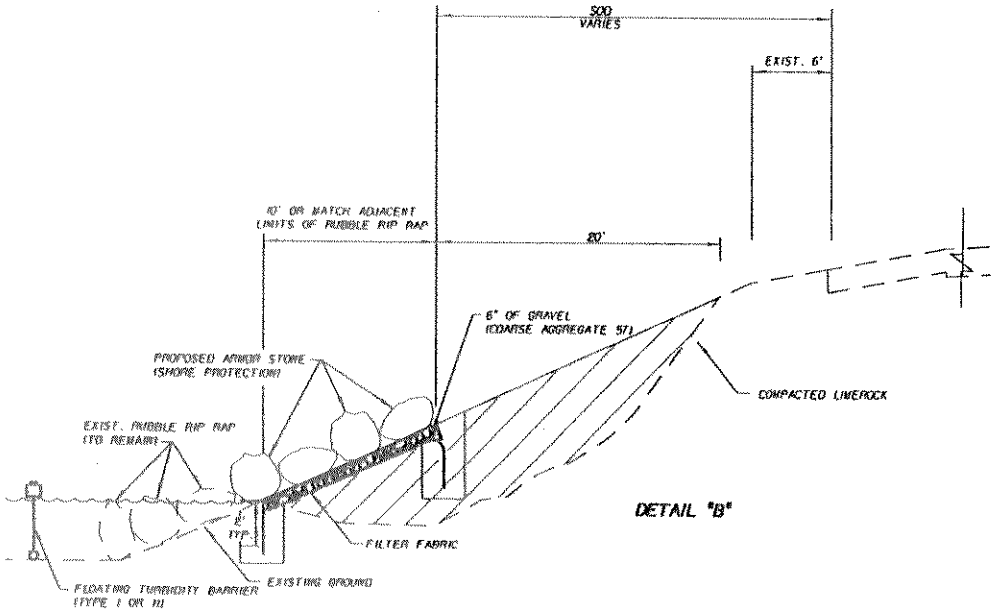
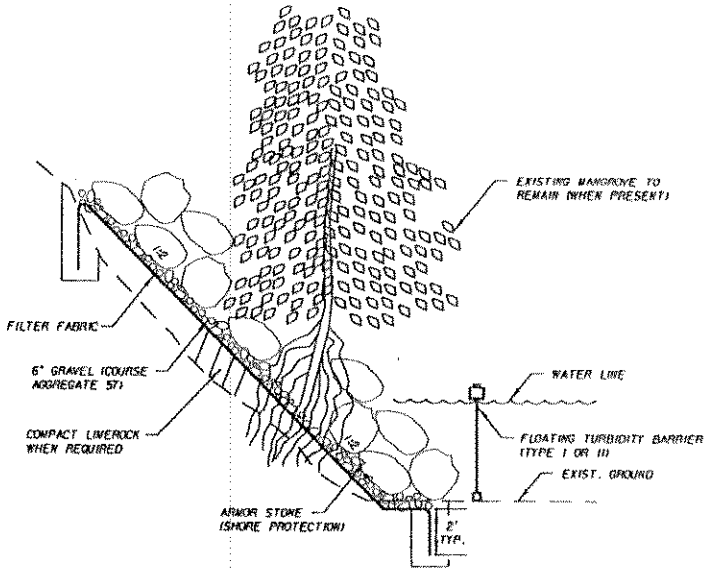
Feet

PROJECT LOCATION MAP

FIGURE - 1



DETAIL "B"



DETAIL "C"

(TO BE USED AT LOCALIZED AREAS WHERE A MANGROVE TREE IS PRESENT)

NOTE: PROPOSED CONSTRUCTION TO OCCUR ABOVE EXISTING HIGH WATER ELEVATION.

LEGEND

FABRIC-FORMED CONC. RIPRAP | RUBBLE RIPRAP | MISC. ASPHALT PAVT. | SOD | EMBANKMENT

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DMJM HARRIS | AECOM
800 DOUGLAS ROAD, SUITE 770
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TEL: (305) 441-6554
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PE LICENSE NO. 44744

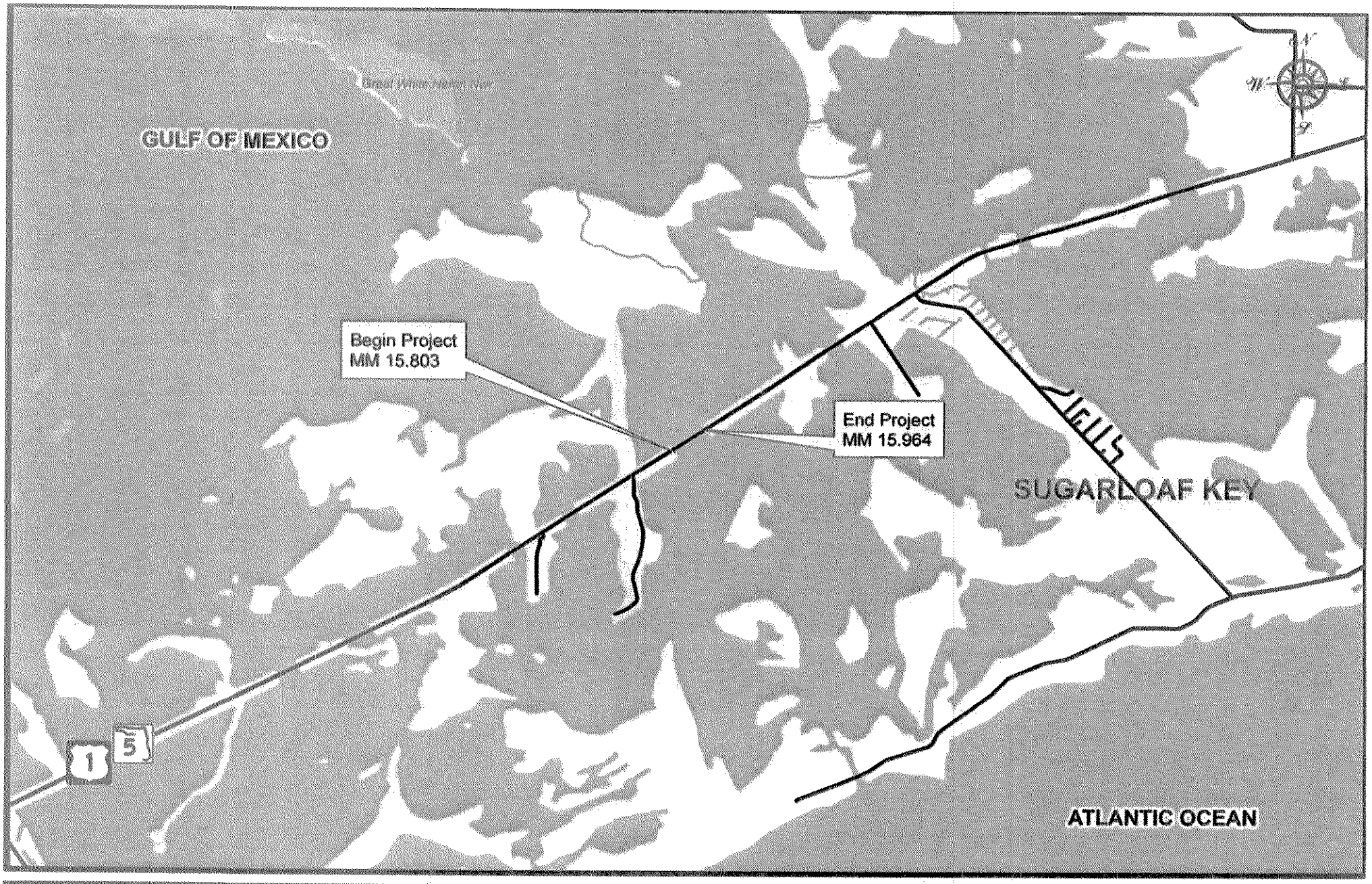
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

TYPICAL SECTION

SHEET NO.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED HERON AND DATED ...



Keys Shoreline Restoration / Stabilization Projects
From MM 15.803 to MM 15.964 - Lower Sugarloaf Channel
Financial Project ID: 421240-4-52-01
Monroe County, FL
Sources- Florida Geographic Data Library & Street Map USA

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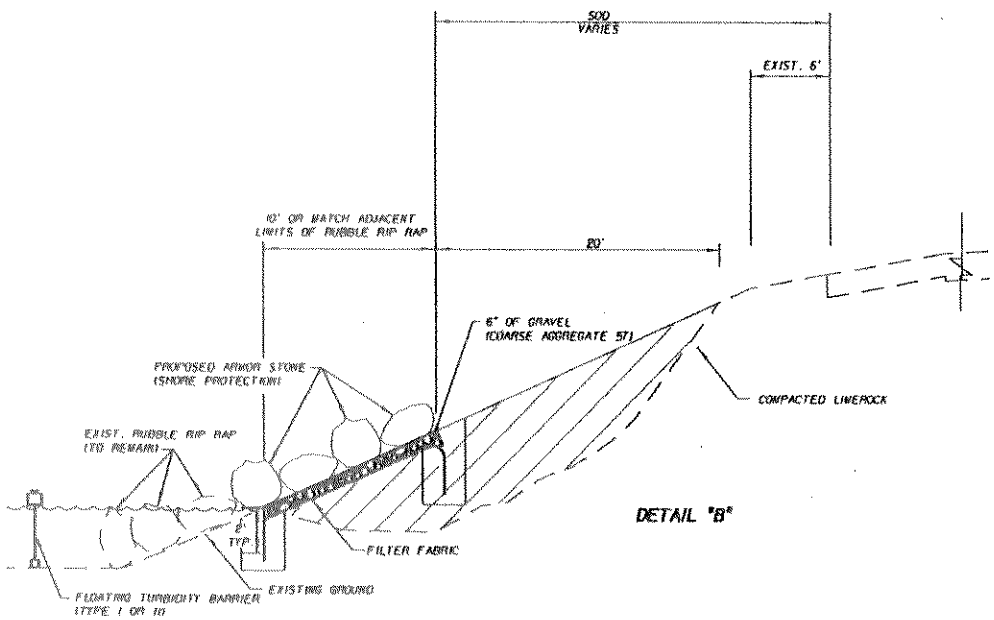
PROJECT LOCATION MAP
FIGURE - 1



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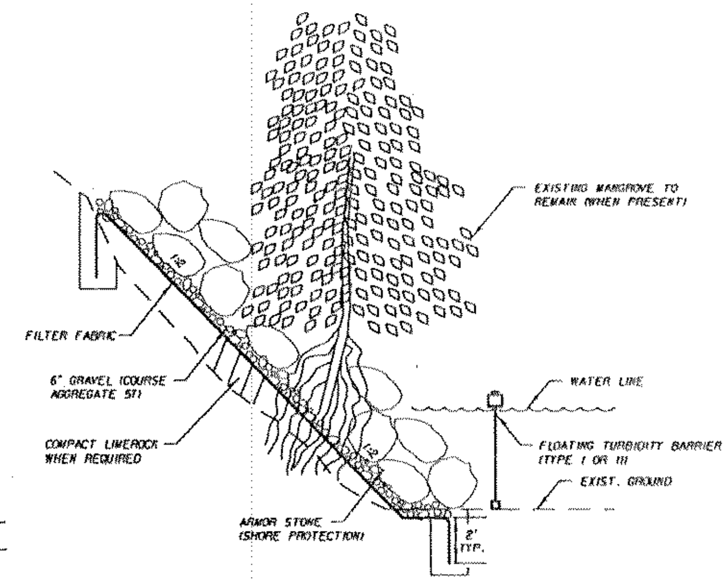

DETAIL "C"
(TO BE USED AT LOCALIZED AREAS WHERE A MANGROVE TREE IS PRESENT)

NOTE: PROPOSED CONSTRUCTION TO OCCUR ABOVE EXISTING HIGH WATER ELEVATION.

2/22/07

LEGEND: FABRIC-FORMED CONC. RIPRAP — RUBBLE RIPRAP — MISC. ASPHALT PAVT. — SOD — EMBANKMENT

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DMJM HARRIS | AECOM
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TEL: (305) 444-4691
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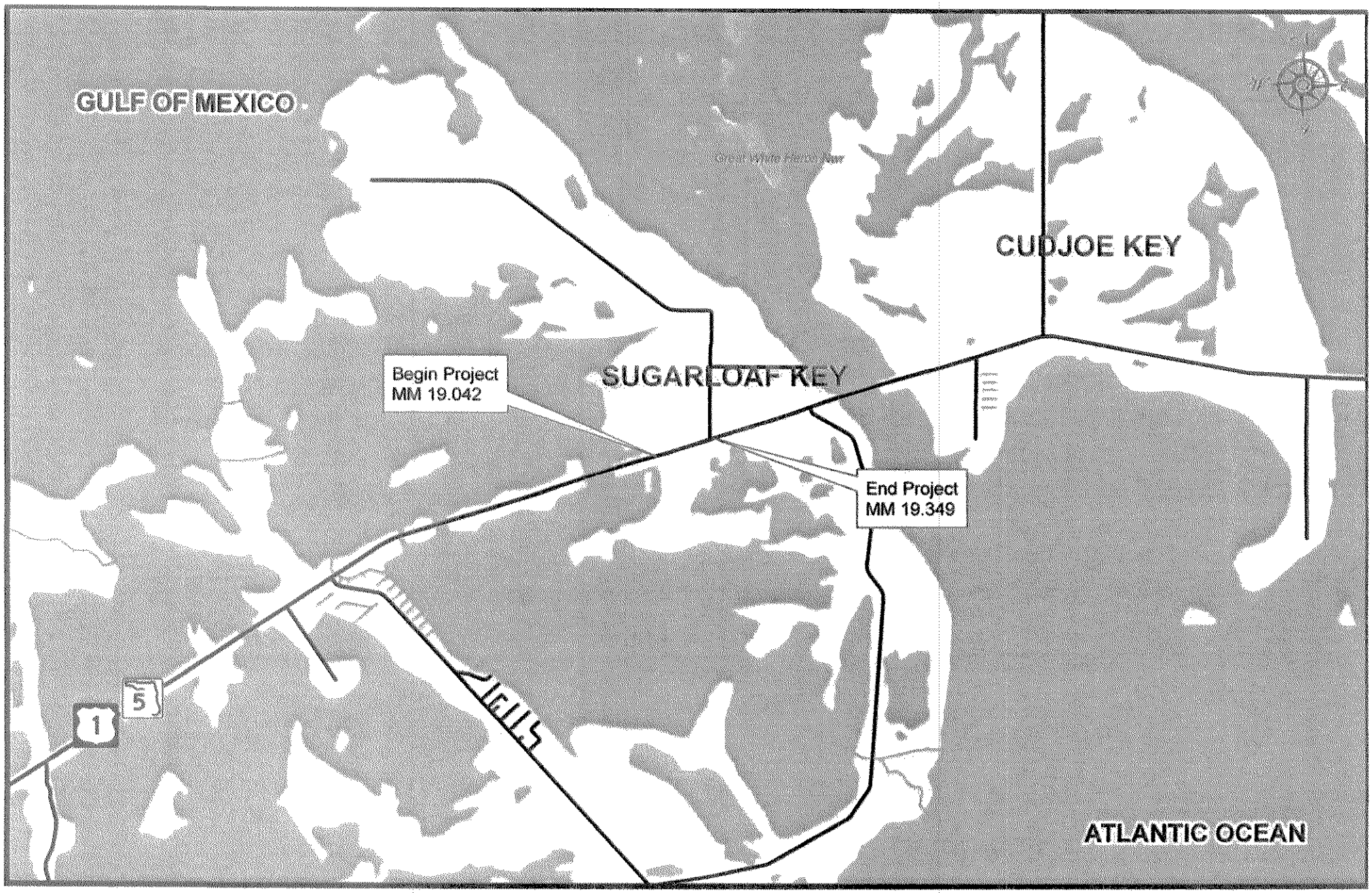
FLORIDA CERT. NO. 00000338
ALEJANDRO O. MEITIN, P.E.
PE LICENSE NO. 49744

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

TYPICAL SECTION

SHEET NO.



Keys Shoreline Restoration / Stabilization Projects
From MM 19.042 to MM 19.349 - Upper Sugarloaf Sound / Crane Blvd.
Financial Project ID: 419828-2-52-01
Monroe County, FL
Sources- Florida Geographic Data Library & Street Map USA

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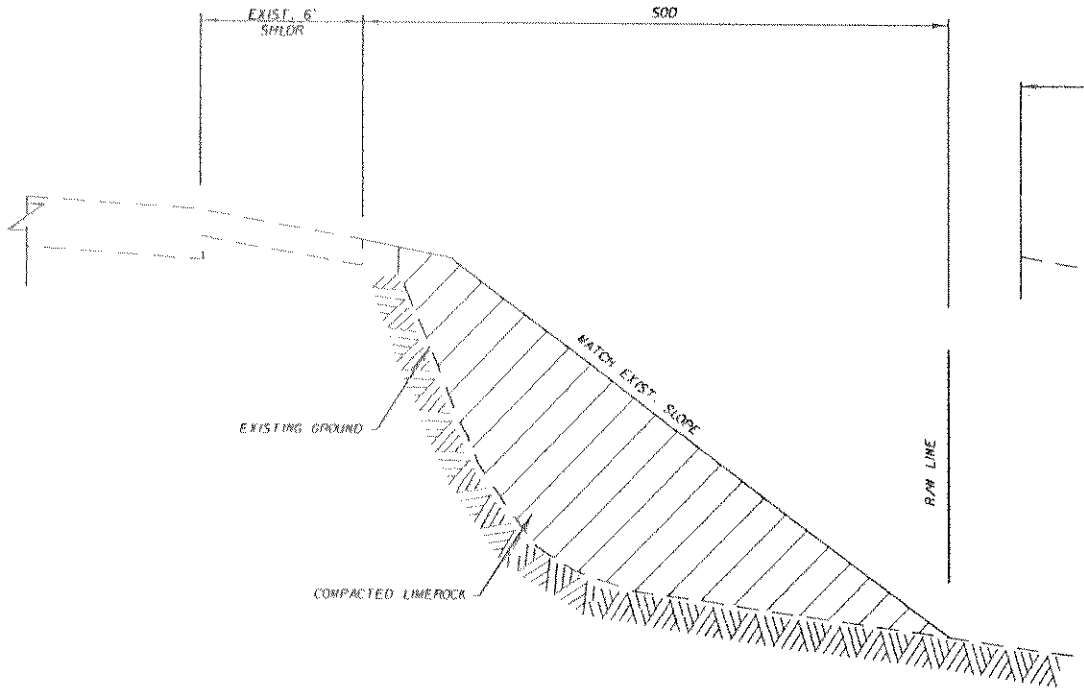
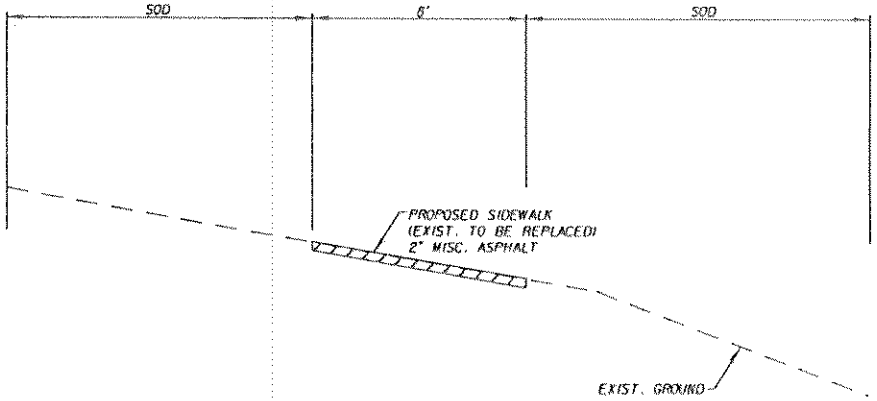
Feet

PROJECT LOCATION MAP
FIGURE - 1



DETAIL "F"



DETAIL "G"

LEGEND

FABRIC-FORMED CONC. RIPRAP

RUBBLE RIPRAP

MISC. ASPHALT PAVT.

SOD

EMBANKMENT

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DMJM HARRIS | AECOM
600 DOUGLAS ROAD, SUITE 170
CORAL GABLES, FL 33134
TEL: (305) 444-8856
FAX: (305) 444-4300
FLORIDA CERT. NO. 00000038
ALEXANDRO G. REYES, P.E.
PE LICENSE NO. 49744

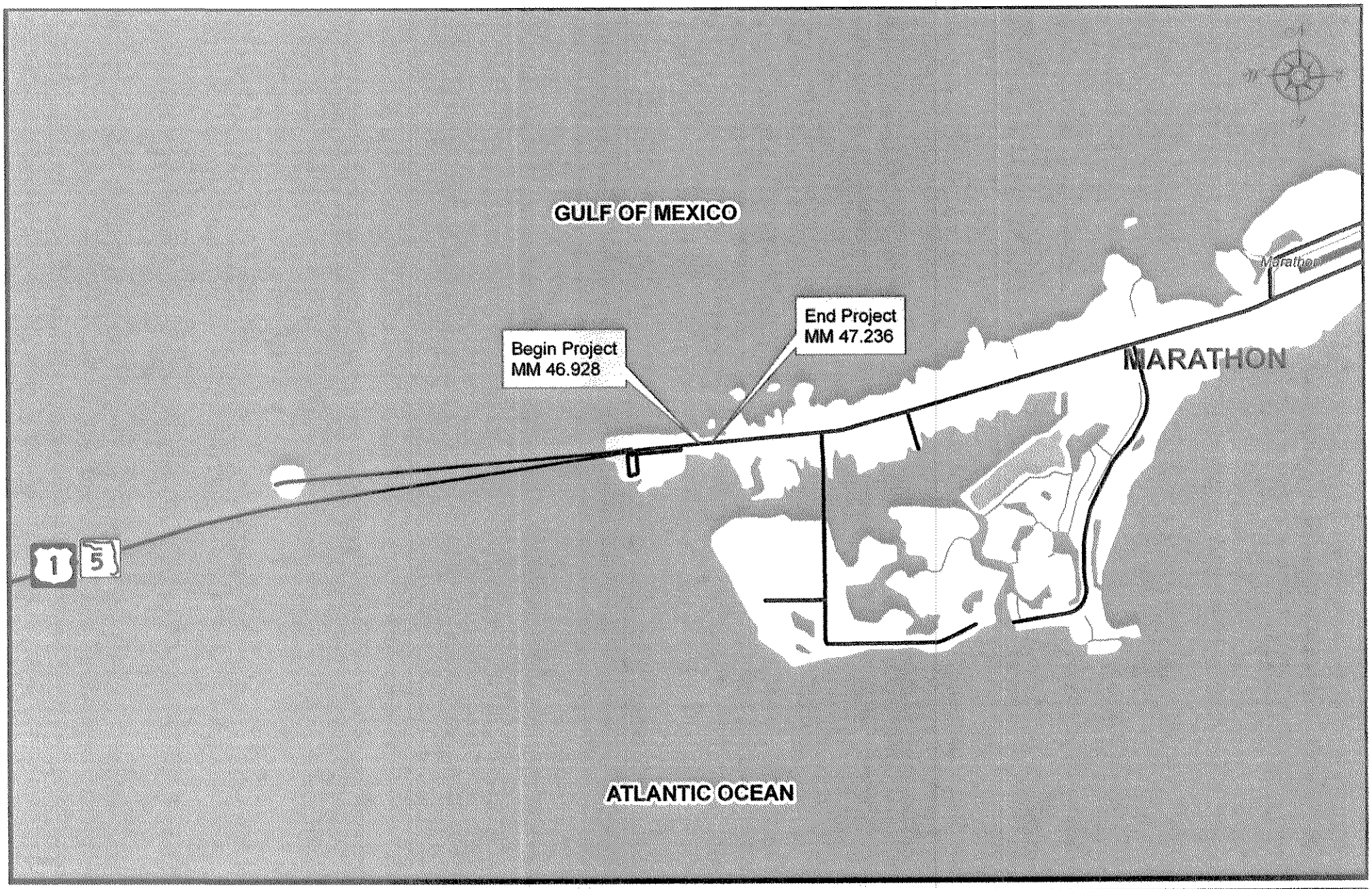
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

TYPICAL SECTION

SHEET NO.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED BY [illegible]

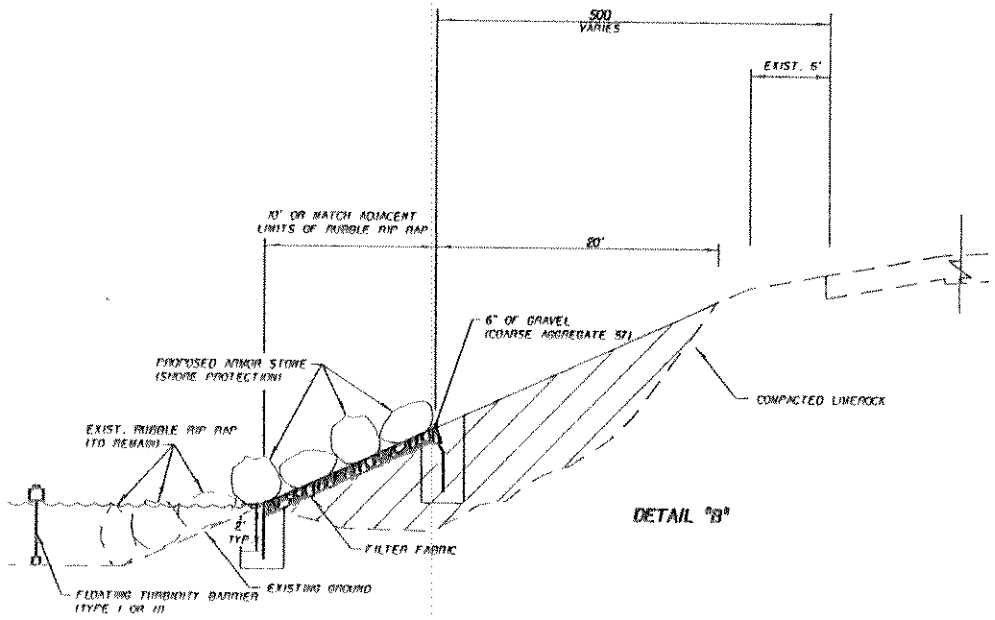


Keys Shoreline Restoration / Stabilization Projects
From MM 46.928 to MM 47.236 - Knight Key Channel
Financial Project ID: 420928-1-52-01
Monroe County, FL
Sources- Florida Geographic Data Library & Street Map USA

0 2,000 4,000 8,000 Feet

PROJECT LOCATION MAP

FIGURE - 1



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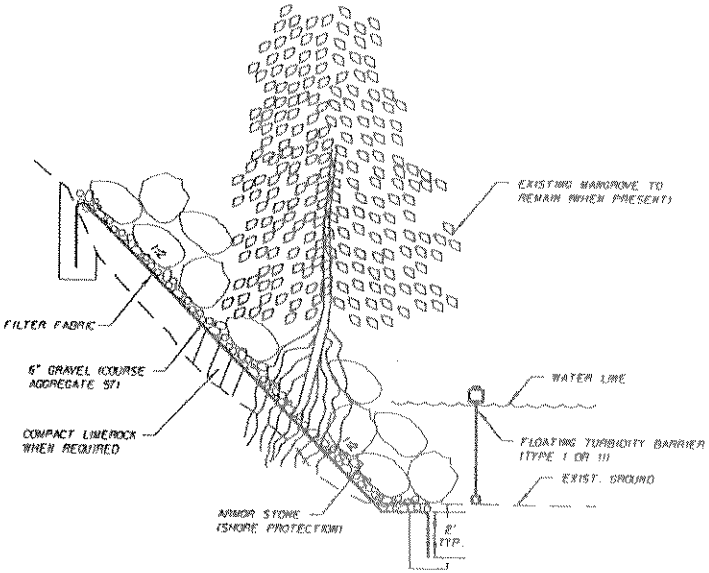

DETAIL "C"

(TO BE USED AT MANGROVE AREAS WHERE A MANGROVE TREE IS PRESENT)

NOTE: PROPOSED CONSTRUCTION TO OCCUR ABOVE EXISTING HIGH WATER ELEVATION.

LEGEND

FABRIC-FORMED CONC. RIPRAP

RUBBLE RIPRAP

MISC. ASPHALT PAVT.

SOD

EMBANKMENT

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

DMJM HARRIS | AECOM
300 DOUGLAS ROAD, SUITE 170
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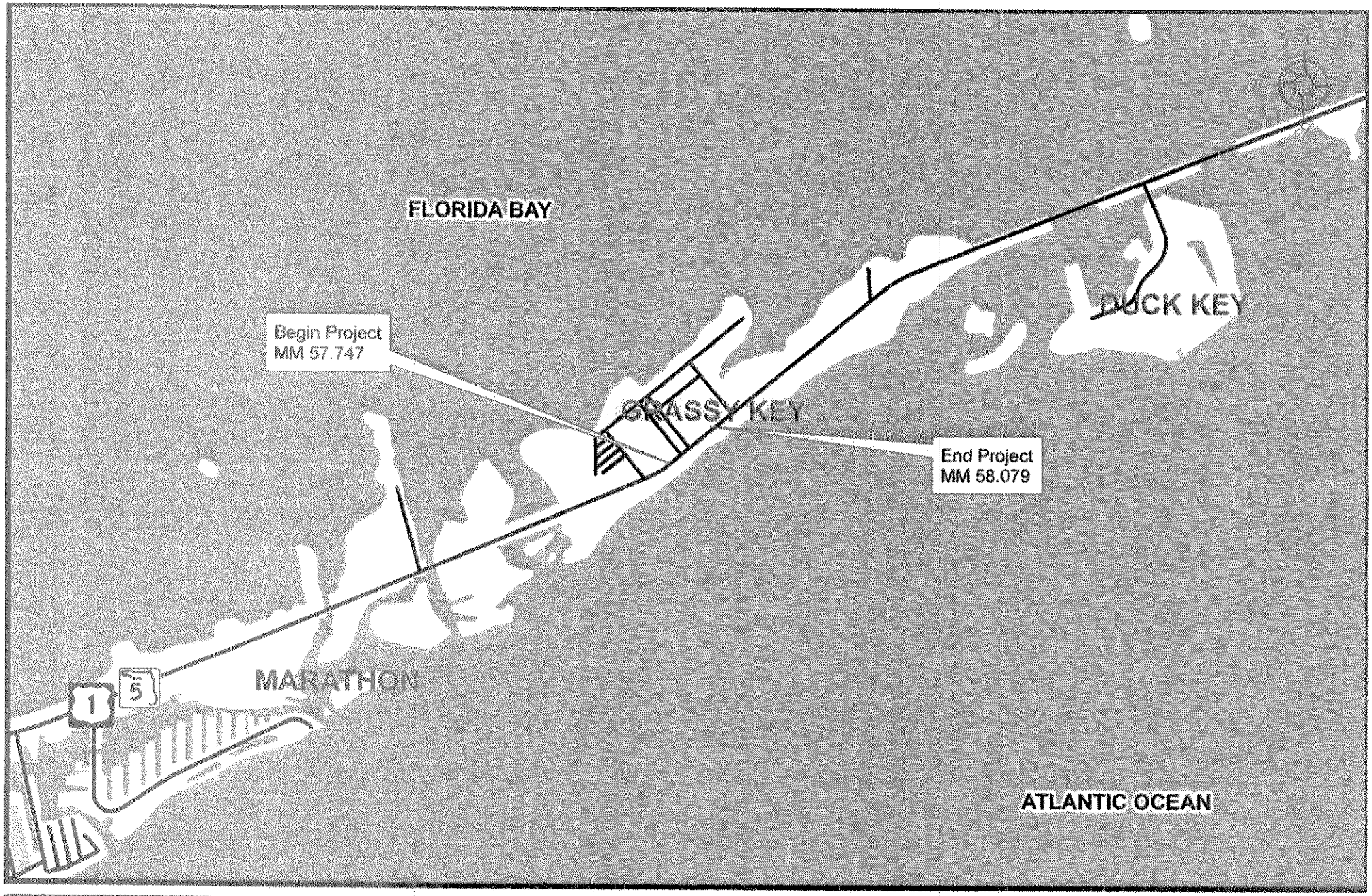
FAX: (305) 444-4326
FLORIDA CERT. NO. 00000638
ALEJANDRO G. VEITIA, P.E.
FL LICENSE NO. 49744

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

TYPICAL SECTION

SHEET NO.

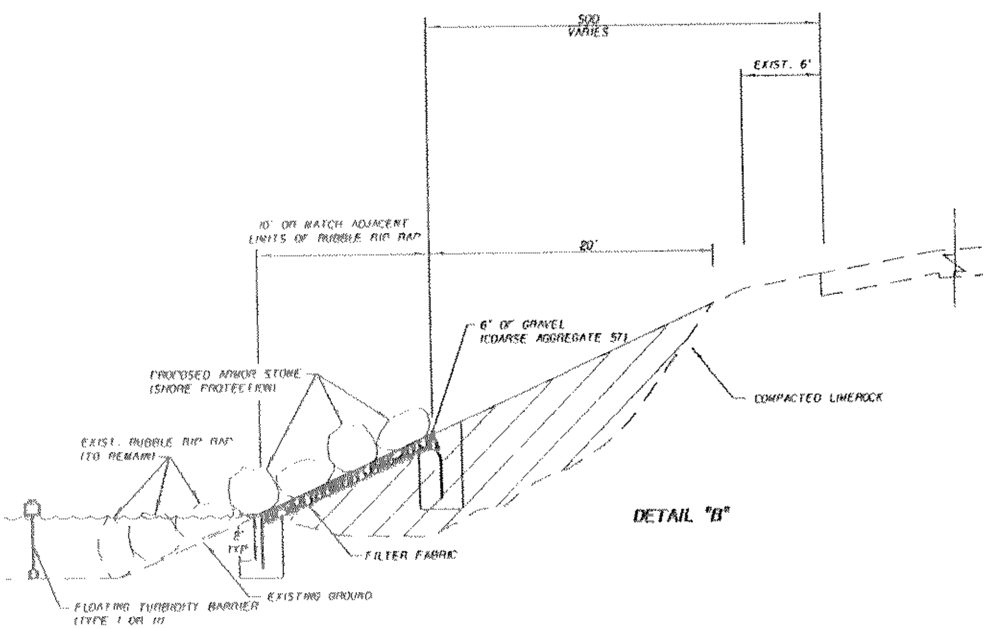


Keys Shoreline Restoration / Stabilization Projects
From MM 57.747 to MM 58.079 - Grassy Key
Financial Project ID: 420928-7-52-01
Monroe County, FL
Sources- Florida Geographic Data Library & Street Map USA

0 2,000 4,000 8,000
Feet

PROJECT LOCATION MAP

FIGURE - 1



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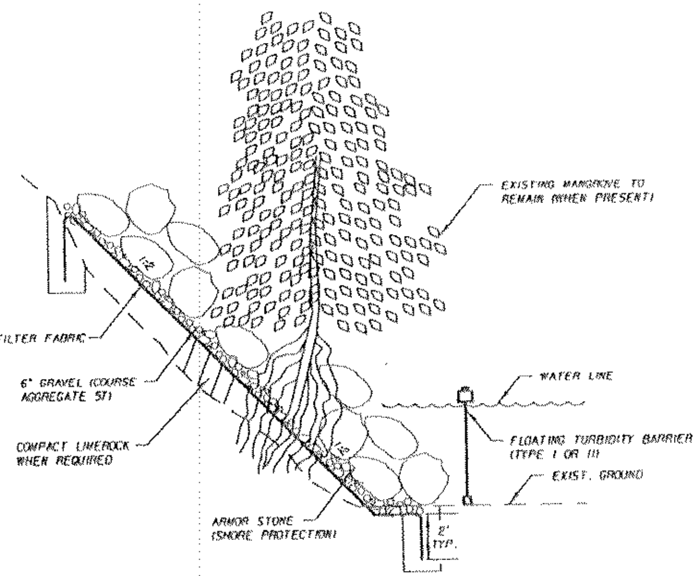

DETAIL "C"

(TO BE USED AT LOCALIZED AREAS WHERE A MANGROVE TREE IS PRESENT)

NOTE: PROPOSED CONSTRUCTION TO OCCUR ABOVE EXISTING HIGH WATER ELEVATION.

2/22/07

LEGEND: FABRIC-FORMED CONC. RIPRAP | RUBBLE RIPRAP | MISC. ASPHALT PAVT. | SOD | EMBANKMENT

REVISIONS					
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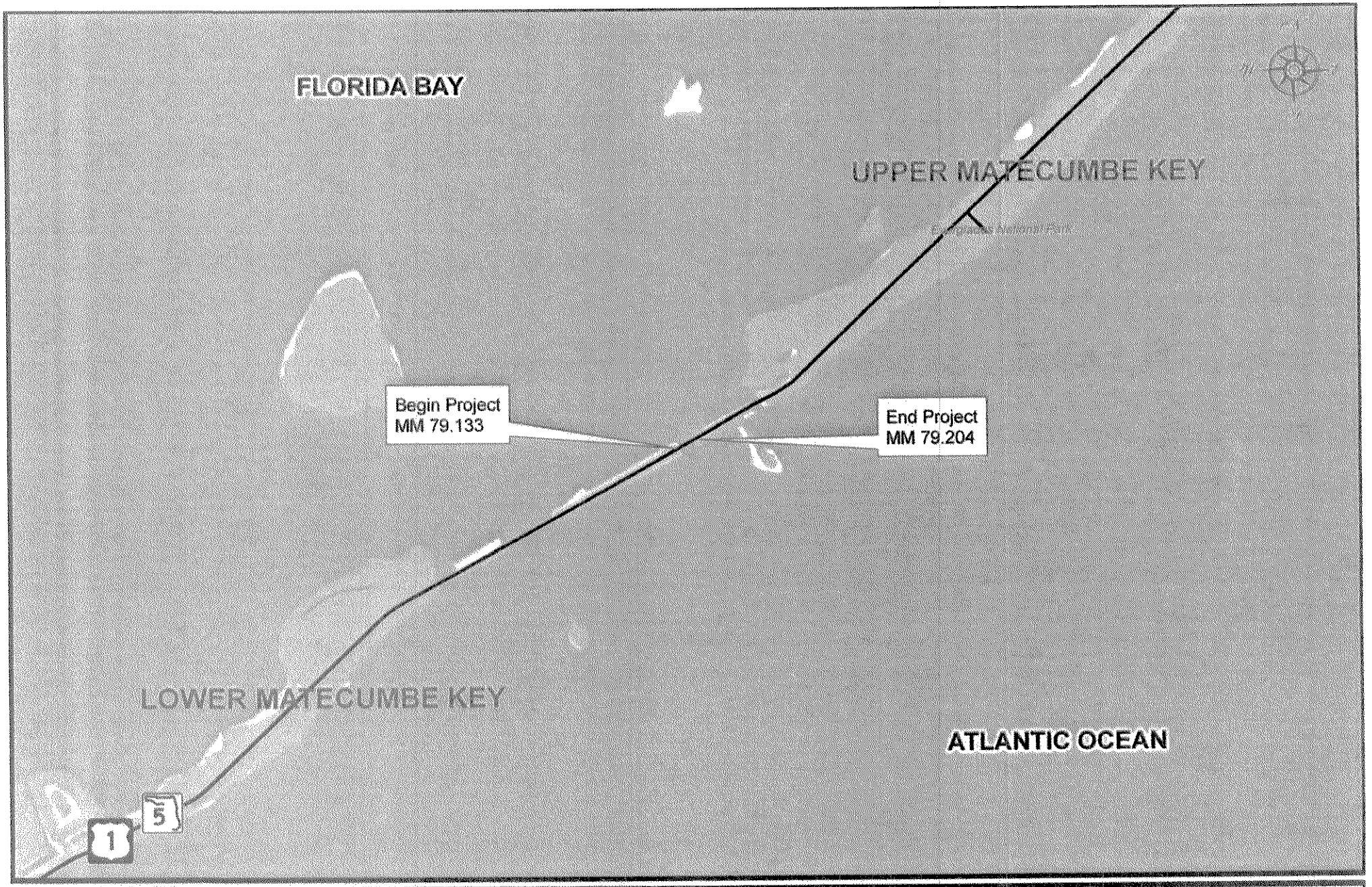
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

TYPICAL SECTION

SHEET NO.



Keys Shoreline Restoration / Stabilization Projects
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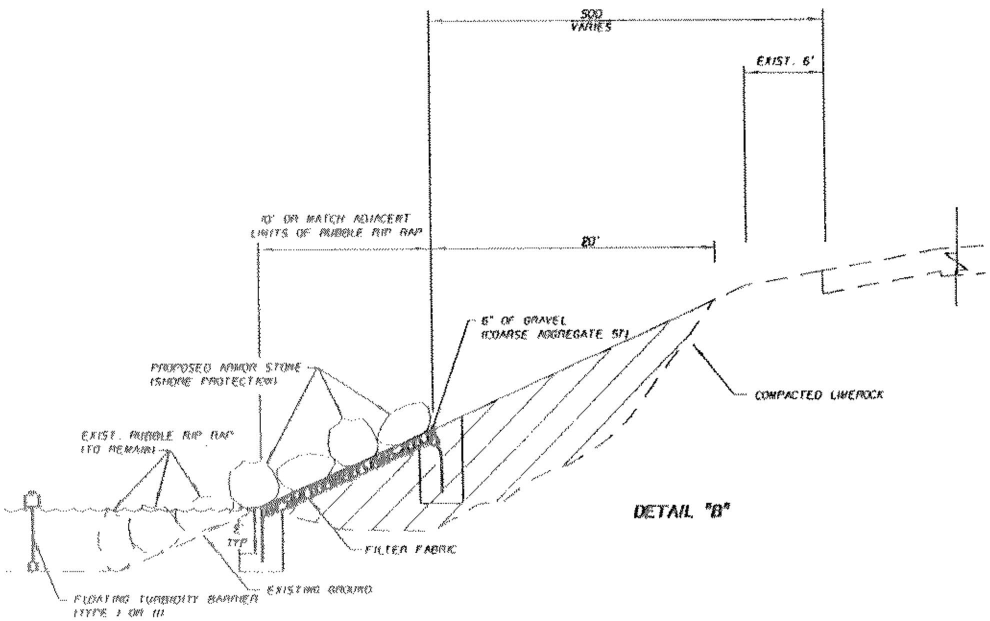
Financial Project ID: 419828-3-52-01
Monroe County, FL
Source- Florida Geographic Data Library & Street Map USA

0 2,000 4,000 8,000 Feet

PROJECT LOCATION MAP

FIGURE - 1



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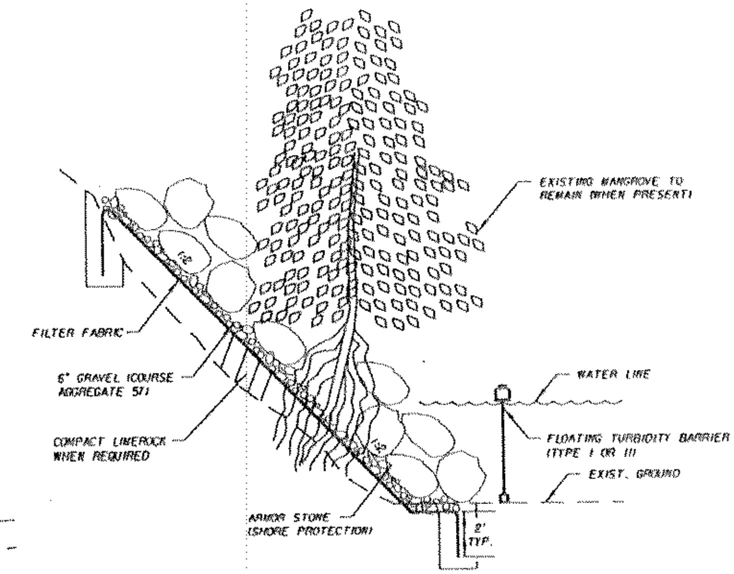

DETAIL "C"

(TO BE USED AT LOCALIZED AREAS
WHERE A MANGROVE TREE IS PRESENT)

NOTE: PROPOSED CONSTRUCTION TO OCCUR ABOVE EXISTING HIGH WATER ELEVATION.

LEGEND: FABRIC-FORMED CONC. RIPRAP | RUBBLE RIPRAP | MISC. ASPHALT PAVT. | SOD | EMBANKMENT

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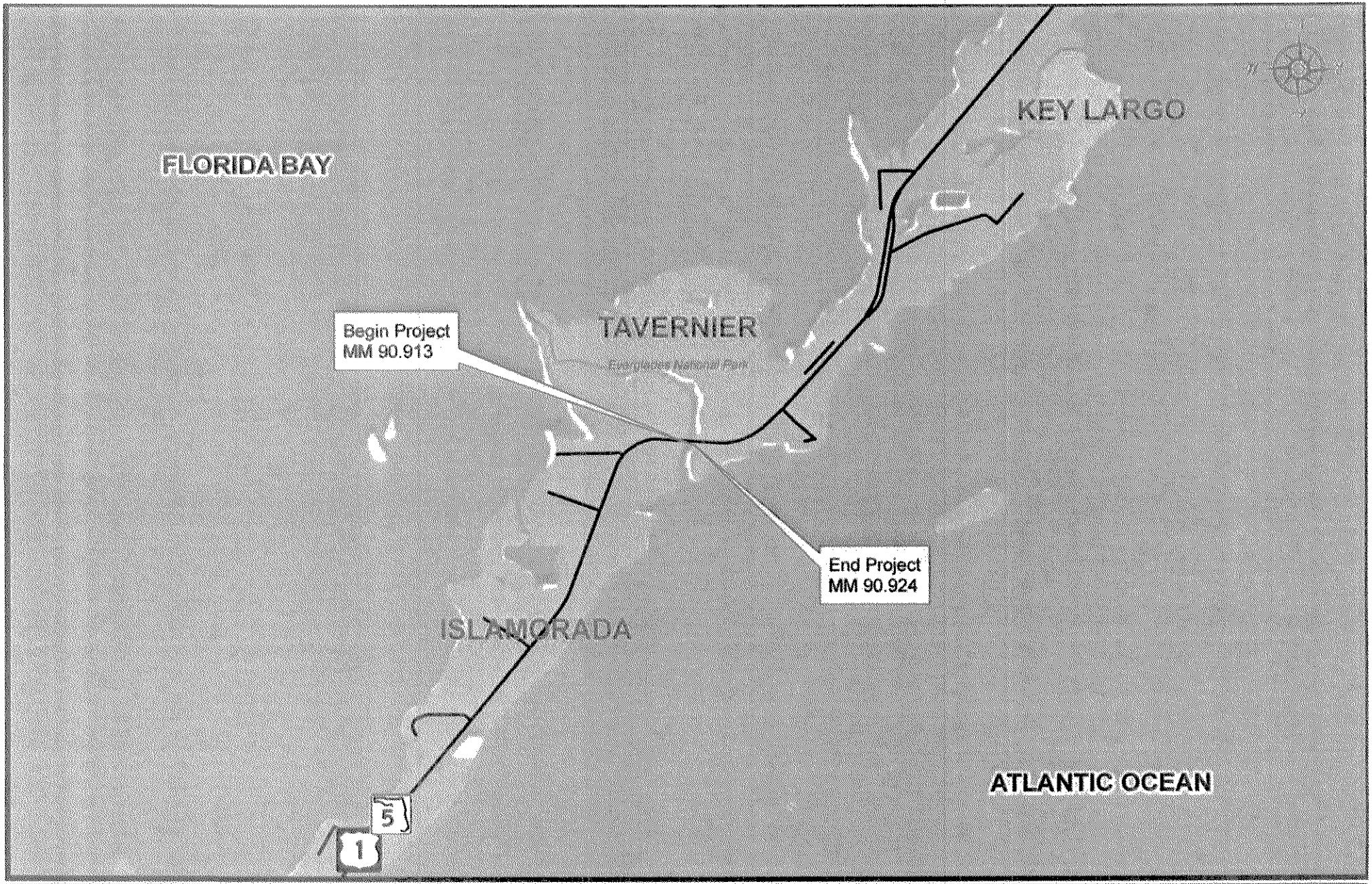
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

TYPICAL SECTION

SHEET NO.

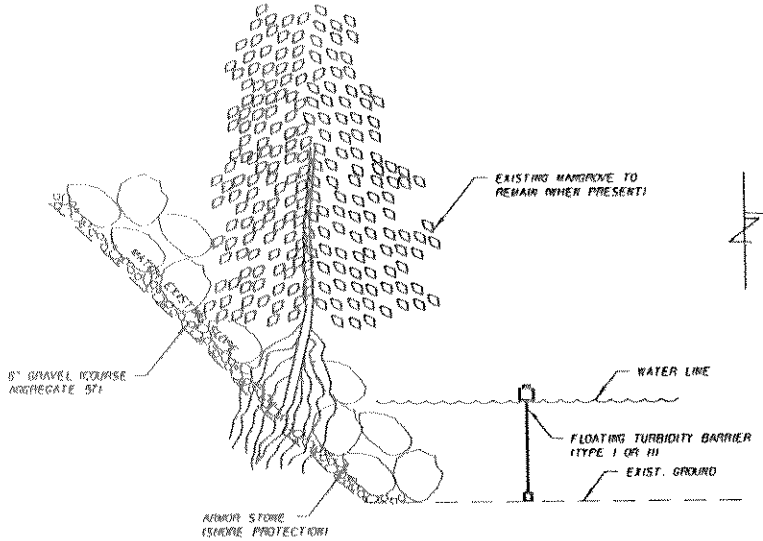


Keys Shoreline Restoration / Stabilization Projects
From MM 90.913 to MM 90.924 - Tavernier Creek
Financial Project ID: 419828-7-52-01
Monroe County, FL
Sources- Florida Geographic Data Library & Street Map USA

0 2,000 4,000 8,000 Feet

PROJECT LOCATION MAP

FIGURE - 1



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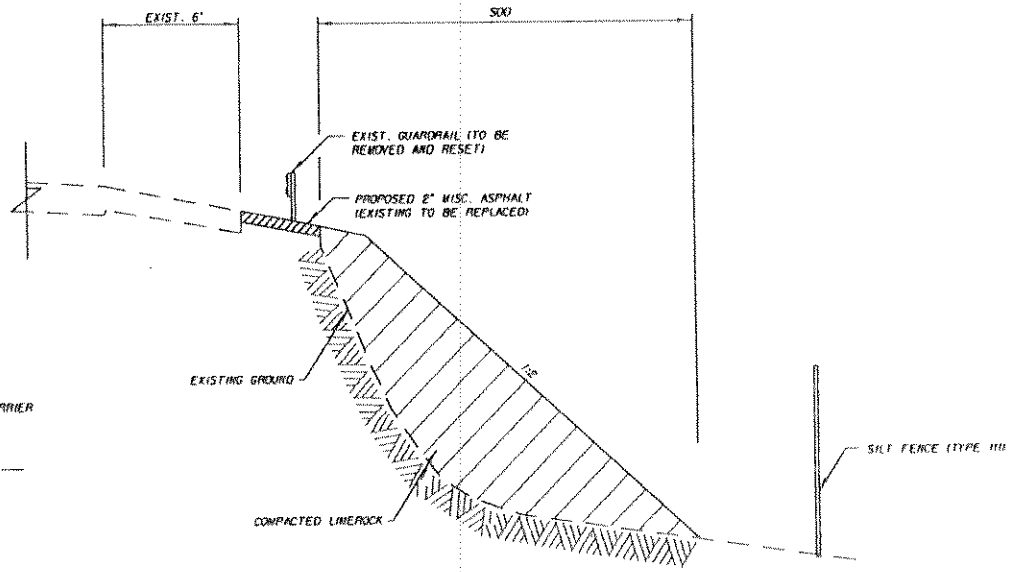

DETAIL "D-1"

2/22/17

LEGEND

FABRIC-FORMED CONC. RIPRAP | RUBBLE RIPRAP | MISC. ASPHALT PAVT. | SOD | EMBANKMENT

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
S.R. 5	MONROE	

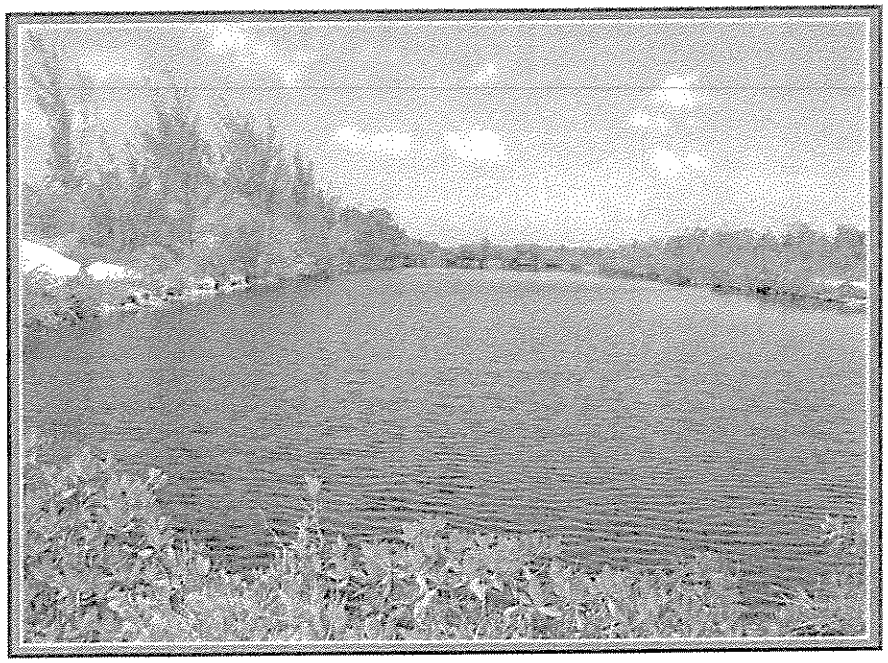
TYPICAL SECTION

SHEET NO.

Florida Department of Transportation

US 1/SR-5 Hurricane Erosion Repair Project

Mitigation Plan



Prepared For:

Florida Department of Transportation
District Six
1000 N.W. 111th Avenue
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Prepared By:

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8925 S.W. 148th Street, Suite 100
Miami, Florida 33176

November 2007

Table of Contents

Attachments

Introduction

Hurricane Wilma struck the Florida Keys on October 24, 2005 as the most intense hurricane ever recorded in the Atlantic basin. Wilma made several landfalls, with the most destructive effects felt in the Yucatán Peninsula of Mexico, Cuba, and the State of Florida. At least 63 deaths were reported, and damage was estimated at over $20.6 billion, making Wilma the third costliest storm in U.S. history.

The Overseas Highway suffered extensive damage to the limerock roadbed as a result of Hurricane Wilma. Storm surge estimated at 6-9 feet caused damage to the US 1 causeway in a number of locations throughout the Keys. Repairing the damage to the Overseas Highway is essential to protect the road from further damage from subsequent storms. Implementing the needed repairs will involve environmental impacts to the fringing mangrove wetland community established along the shoreline of the US 1 causeway.

The purpose of this Mitigation Plan is to describe compensatory mitigation measures proposed to offset the unavoidable impacts to 0.56 acres of fringing mangrove wetlands associated with the proposed roadway repairs. The short-term goal of the mitigation plan is to physically restore an area totaling 0.93 acres through the removal of fill material and the re-establishment of natural elevations and grades. In addition, the short-term goal includes re-vegetation of the restoration area by planting suitable wetland vegetation. The long-term goal of the mitigation plan is to restore the mitigation area to a fully-functional wetland community fully interacting with the larger landscape and ecology of the Florida Keys.

Project Impacts

The proposed roadway repairs will result in a total of 0.56 acres of impacts to fringing mangrove wetlands associated with the Overseas Highway. A Uniform Mitigation Assessment Method analysis completed for the project impacts resulted in total UMAM functional loss of 0.353 (Table 1).

Table 1. Project impacts and Uniform Mitigation Assessment Method functional loss scores for the U.S. 1 Overseas Highway hurricane erosion repair project. This impact assessment has been coordinated with the South Florida Water Management District and U.S. Army Corps of Engineers. The numbers in this table represent the outcome of this coordination and utilized the highest scores when there was a disparity.

Assessment Area	Impacts (ac)	Delta	Functional Loss
Stock Island	0.064 ac	-0.63	0.040
Big Coppitt Key	0.074 ac	-0.63	0.047
Lower Sugarloaf Key	0.204 ac	-0.63	0.129
Sugarloaf/Crane Blvd	0.111 ac	-0.63	0.070
Knight Key (2 sites)	0.044 ac	-0.63	0.028
Grassy Key	0.045 ac	-0.63	0.028
Teatable Key Channel	0.012 ac	-0.63	0.008
Tavernier Creek	0.005 ac	-0.63	0.003
Totals	**0.559 ac**		**0.353**

Mitigation Plan

To offset the unavoidable impacts to 0.56 acres of fringing mangrove wetlands associated with the proposed roadway repairs, the Florida Department of Transportation (FDOT) is proposing to create 0.93 acres of mangrove wetlands on a 9.2 acre property located at mile marker 24.5 on Summerland Key (Figure 1). The property is owned by FDOT and is presently used as a storage and staging area.

The proposed mitigation plan involves restoring 0.93 acres of filled wetlands to match the adjacent mangrove wetland community located to the west. This will be accomplished through the removal of fill material to achieve the appropriate grade and hydrological conditions. Following excavation, red and black mangroves will be planted to accelerate wetland functionality. The existing mangrove vegetation along the shoreline of the borrow pit immediately adjacent to the mitigation site will remain.

Current Site Conditions

The majority of the FDOT property is a mangrove wetland composed of a mixture of black and red mangroves. Portions of the property were previously developed as a borrow pit and storage area (Table 2). Reference photographs of the site taken March 26, 2007 are included in Attachment 1.

The area proposed for restoration includes a 0.93 acre spoil area composed of limerock piles in excess of 10 feet (Figure 2). This spoil area is located on a former mangrove and salt marsh community filled for limerock extraction. Site topography has been altered to preclude natural hydrology and the entire mitigation area is disturbed uplands. The vegetation present includes a mixture of invasive exotic and native vegetation.

Table 2. Habitat types and approximate areas at the Florida Department of Transportation borrow pit and storage area located on Summerland Key.

Habitat Type	FLUCCS Category	Comments
Mangrove wetlands	6120 - mangrove swamp	6.40 acres of mangrove wetlands
Borrow area	7420 – borrow areas	1.09 acre open water borrow pit
Disturbed upland spoil area	7430 – spoil areas	0.93 acre upland spoil area, limerock and construction debris mounds to 15', invasive exotic and limited native vegetation present
Disturbed wetland spoil area	7430 – spoil areas	0.45 acre spoil area consisting of compacted limerock, elevations are low and support limited wetland vegetation. Periodic flooding occurs.
FDOT Staging Area	7400 – disturbed land	0.50 acre driveway and staging area to remain

The hydrologic conditions over the undisturbed portions of the property are tidal; the assessment area is located adjacent to a mangrove swamp that is connected to the waters of Kemp Channel and eventually the Atlantic Ocean (Figure 3 - 4). The mitigation area will flood regularly once adjacent grades are established, and will also receive hydrologic

inputs from the borrow pit adjacent to the east. A mean high water survey prepared for the State of Florida, Division of State Lands shows the mean high water located to the west along Kemp Channel (Attachment 2). However, field observations of the site indicate regular tidal inundation through two low sloughs that connect to open water, and standing water is present on the site year round as evidenced by the presence of well developed red mangroves. The site is located in an undeveloped area of Summerland Key; the adjacent properties consist of intact natural habitats and are not zoned for development (Figure 5).

Mitigation Functional Assessment

The anticipated benefits of the proposed restoration of 0.93 acres of disturbed uplands into functional mangrove habitat were assessed using UMAM. The relative functional gain (RFG) for the proposed mitigation is 0.46 and mitigation credits are 0.435 (Table 3).

Table 3. Uniform Mitigation Assessment Method summary data for the Summerland Borrow Pit assessment area. Time lag was determined to be five years, and restoration risk was 1.5 based on the anticipation of a high probability for successful restoration.

Assessment Area	Size (ac)	Delta	Relative Functional Gain	Credits
Upland	0.93	0.80	0.46	0.435

The assessment area was assigned values for the three UMAM parameters based on the general observation that the restoration of appropriate elevations and topography on the site through the removal of fill material will allow the rapid restoration of historic hydrologic conditions and thus much of the original ecological functions. In addition, planting of desirable wetland vegetation will accelerate restoration of the site to a functional mangrove wetland community. The relative functional gain for the proposed mitigation is considerable due to the fact that the site is located within an ecologically

functional landscape and the technology for fill removal and re-vegetation of restored wetlands is a successful restoration technique in the Florida Keys (Attachment 3).

The mitigation site is disturbed, filled uplands with elevations ranging from 8-16 feet above sea level. As per UMAM (F.S. 62-345.500 - Part II - Assessment and Scoring), "*for uplands proposed to be converted to wetlands or other surface waters through creation or restoration measures, the upland areas shall be scored as "zero" in their current condition. Only the "with mitigation" assessment shall be scored in accordance with the indicators listed in subsection 62-345.500(6), F.A.C.*". Thus, RFG is high for the proposed mitigation as a result of the transition from disturbed uplands lacking wetland functions to highly functional mangrove wetlands located within a larger intact natural area.

The technology for successful restoration of mangrove wetlands is available, and the surrounding wetland character of the property relative to the restoration area will assist in the successful recovery of a mangrove wetland. For these reasons, the risk associated with the proposed mitigation is low, and was determined to be 1.5 based on the high probability of successful recovery.

Time for recovery of mangrove wetlands in the Florida Keys is highly variable, with factors such as hydrology and soil conditions influencing recovery time. The proposed mitigation site is located in an area with functional natural hydrology and an intact and productive native wetland plant community immediately adjacent to the site. Therefore, time lag for successful restoration of the site was determined to be five (5) years or a score of 1.14.

Mitigation Summary

The anticipated functional loss associated with the impacts to 0.56 acres of mangrove wetlands resulting from proposed repairs to the Overseas Highway totals **0.353**. The anticipated relative functional gain associated with the proposed restoration of 0.93 acres of uplands into mangrove wetlands is **0.435**. Thus, the proposed mitigation more than

adequately addresses mitigation requirements for the proposed repairs to the Overseas Highway, and results in a surplus of **0.082** credits. The FDOT plans to utilize these additional mangrove wetland mitigation credits on present and/or future FDOT projects in consultation with the South Florida Water Management District and U.S. Army Corps of Engineers.

Planting Plan

The objective of the planting plan is to accelerate the restoration of the mitigation site through the planting of appropriate wetland plant material. The mitigation plan includes the following activities designed to accelerate the vegetative component of the restoration areas following topographical restoration:

Site Excavation: The 0.93 acre mitigation site will be excavated to adjacent wetland grades based on survey elevations (Attachment 2). These elevations range from approximately 0.80 to 1.25 NGVD (1929) and support a well-developed mangrove wetland. Excavation of fill material from the mitigation site will follow the natural topography of the original limestone "caprock"; artificial elevations will not be created through the excavation of the topography. Only fill placed as a result of the mining and storage activities will be removed from the site.

Disposition of Fill Material: All fill material will be removed by truck to an off-site upland storage facility. It is anticipated that the limerock fill material is clean and suitable for recycling. Any solid waste will be removed to an approved offsite disposal facility, i.e. the Monroe County Solid Waste Transfer Station located on Cudjoe Key. Documentation for all solid waste removed from the property will be maintained.

Site Preparation: The success of the topographical restoration and subsequent re-vegetation effort will be enhanced by the placement of suitable organic fill material on the freshly-excavated mitigation area. All areas subject to fill removal will be top-dressed with a mixture of finely crushed limerock fill material (screenings) and organic

soils to create a suitable planting medium. Top-dressing will be of variable depths depending of topography, but a target depth of four inches of material over the restoration area is anticipated. This depth will be sufficient to assist in the establishment of planted vegetation and also facilitate the colonization of the site by native salt marsh species. Limerock screenings from local sources will be mixed with 30% organic black dirt from South Florida. The source of the fill material is anticipated to be the BAT Construction rock mine located on No Name Key as this is one of the only facilities still mining local limestone. The organic material will come from South Florida; the exact source of this material has yet to be identified. This 70:30 blend of native limerock screenings and organic soil from South Florida imitates native Keys marl well, and should provide a loose organic layer to help establish the plantings proposed for the mitigation area. It is anticipated that approximately 450 cubic yards of material will be required to cover the 0.93 acre site with four inches of soil mix.

Vegetative Planting: A 50:50 mixture of red and black mangroves will be planted on the mitigation site. These mangroves will be one-year old specimens and planted on three foot centers throughout the site. It is estimated that a total of 4,800 mangroves will be required to re-vegetate the 0.93 acre mitigation site.

Signage: To prevent degradation of the mitigation area from activities occurring on the adjacent FDOT staging area, signage delineating the mitigation area will be installed along the interface between the mitigation area and the staging area. A total of two signs measuring 12" x 24" and installed on 6 x 6 wooden posts at approximately eye level will be installed. These signs will read:

WETLAND PRESERVATION AREA
NO TRESPASSING
NO DUMPING
NO REMOVAL OF VEGETATION
NO PETS

Monitoring and Maintenance

Following completion of the construction of the mitigation site, FDOT will conduct a baseline mitigation monitoring survey and submit a time zero report to the South Florida Water Management District (Figure 6). The baseline monitoring report will include an as-built survey, the number and species of mangroves installed, and photo documentation of the site. Annual monitoring reports will be provided for a period of five years or until the site is determined to be successfully restored and shall include:

a) Permit Number
b) Date of monitoring
c) Species list and number of plants surviving
d) Percent cover by wetland vegetative species
e) Percent cover by exotic/nuisance vegetative species
f) Description of any exotic plant control procedures
g) Observations of water depth and tidal flow
h) Antecedent weather conditions
i) Tidal stage
j) Photo documentation at a fixed reference point
k) Functional Analysis (UMAM)

Monitoring on the mitigation site will be conducted from a series of four sampling stations (Figure 7). Data on vegetative cover and water depth will be collected at each of the four stations. Vegetative cover will be sampled in a 10' x 10' plot centered at each station using Daubenmire cover classes to visually estimate cover. Observations on invasive exotic plant cover and wildlife utilization will be taken from general observations over the entire site. Sampling will be conducted annually in September to capture the extent of the growing season.

Monitoring Schedule

The mitigation project will begin after all required permits for the US1 erosion repair project and the proposed mitigation project have been acquired. The following mitigation monitoring schedule is proposed based on current information:

Date	Activity	Milestone
May 2008	Excavation complete, organic soil material placed	Site preparation complete
September 2008	Post-planting Baseline Monitoring Report	Planting complete
September 2009	1st Annual Post-planting Monitoring Report	monitoring
September 2010	2nd Annual Post-planting Monitoring Report	monitoring
September 2011	3rd Annual Post-planting Monitoring Report	50% coverage
September 2012	4th Annual Post-planting Monitoring Report	monitoring
September 2013	Final Monitoring and Compliance Report	80% coverage

Success Criteria

Vegetative targets for the restoration site will be to achieve a minimum of 50% wetland vegetative cover in three years and 80% wetland vegetative cover by the end of five years. In addition, nuisance and invasive exotic vegetation will be at 0% coverage

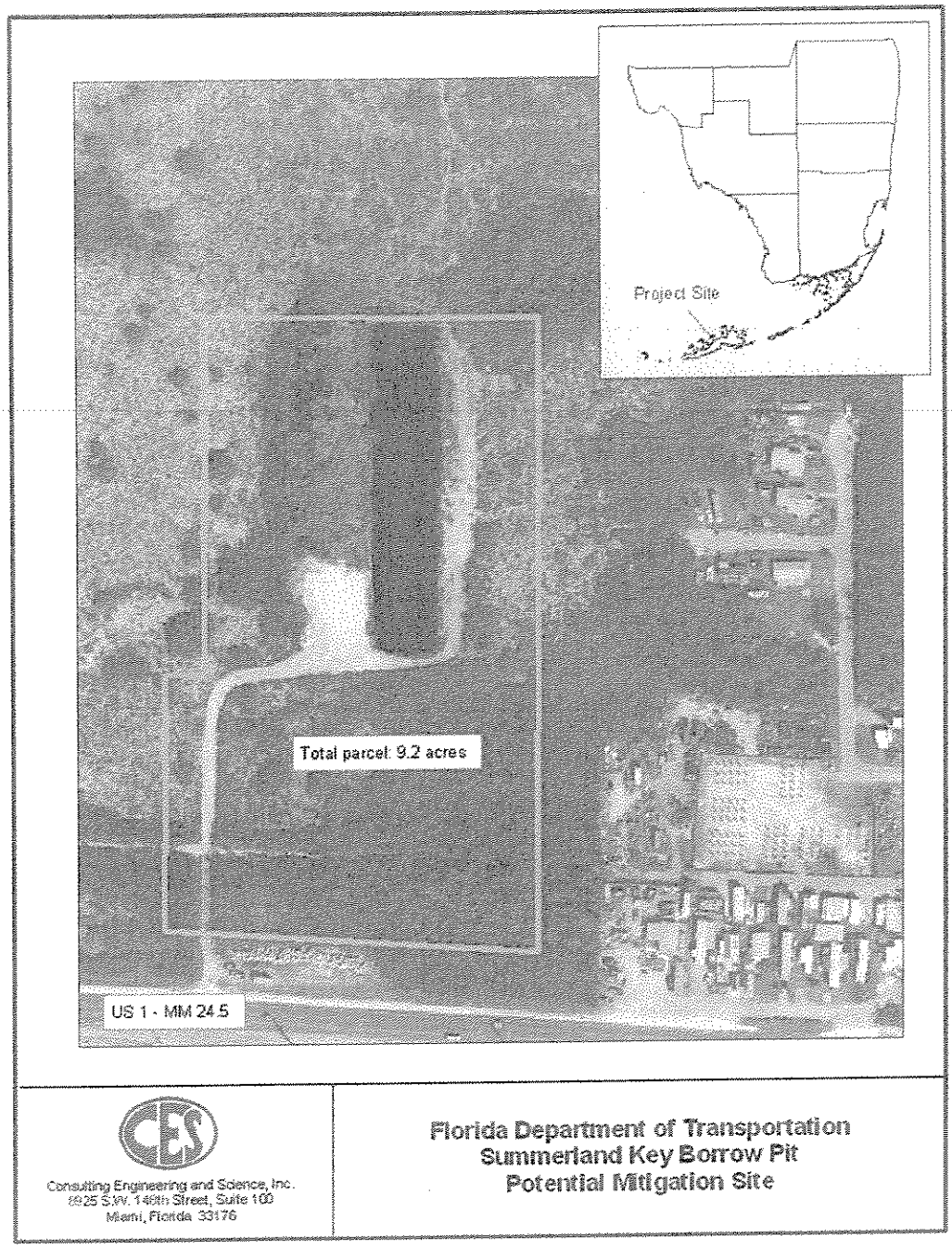


Figure 1. Location of the proposed mitigation site at the Florida Department of Transportation maintenance staging area located at Mile Marker 24.5, Summerland Key.

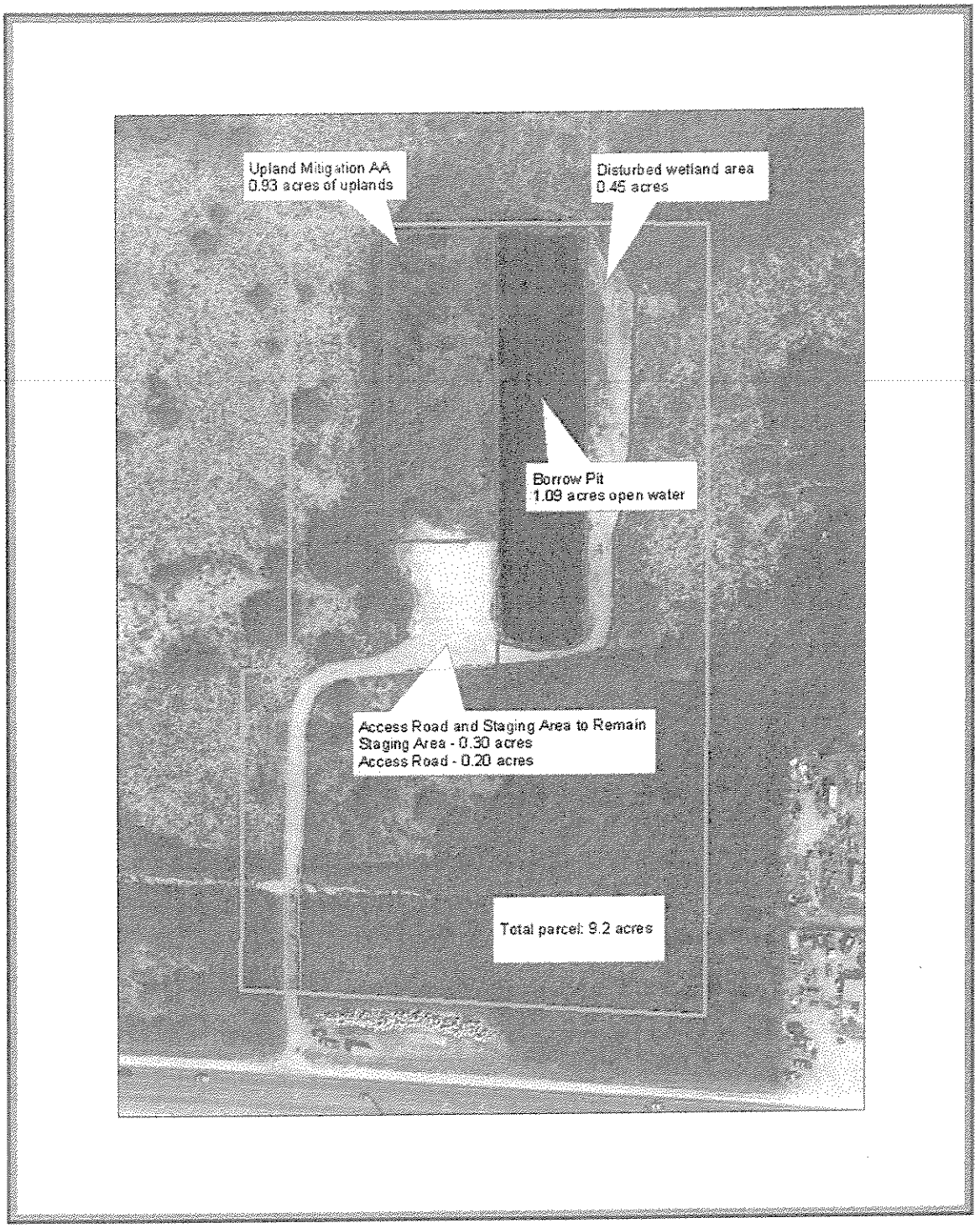


Figure 2. Habitat types and proposed restoration areas on the proposed mitigation site at Mile Marker 24.5, Summerland Key.

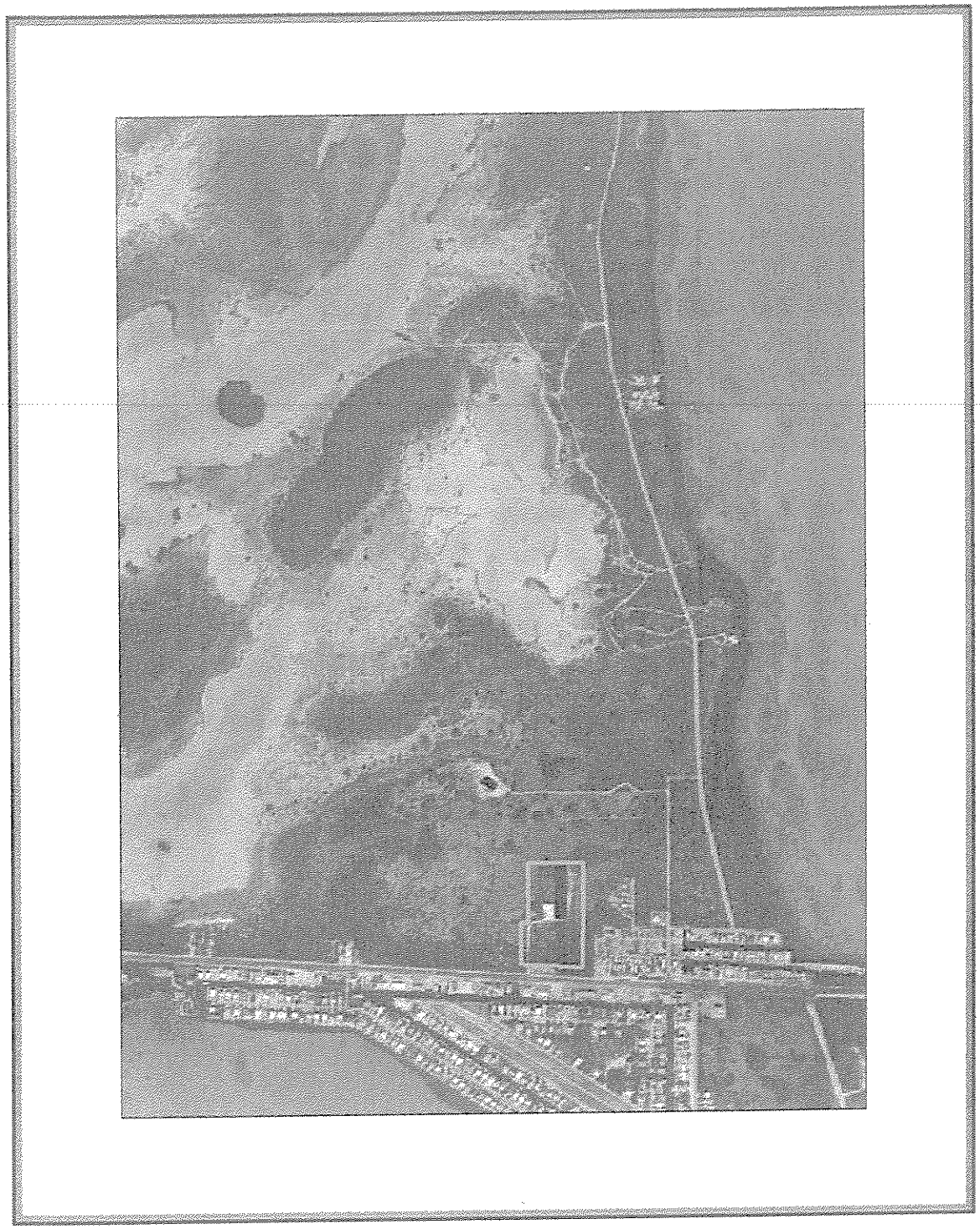


Figure 3. Location of the proposed restoration area on Summerland Key showing the extensive contiguous landscape adjacent to the property.

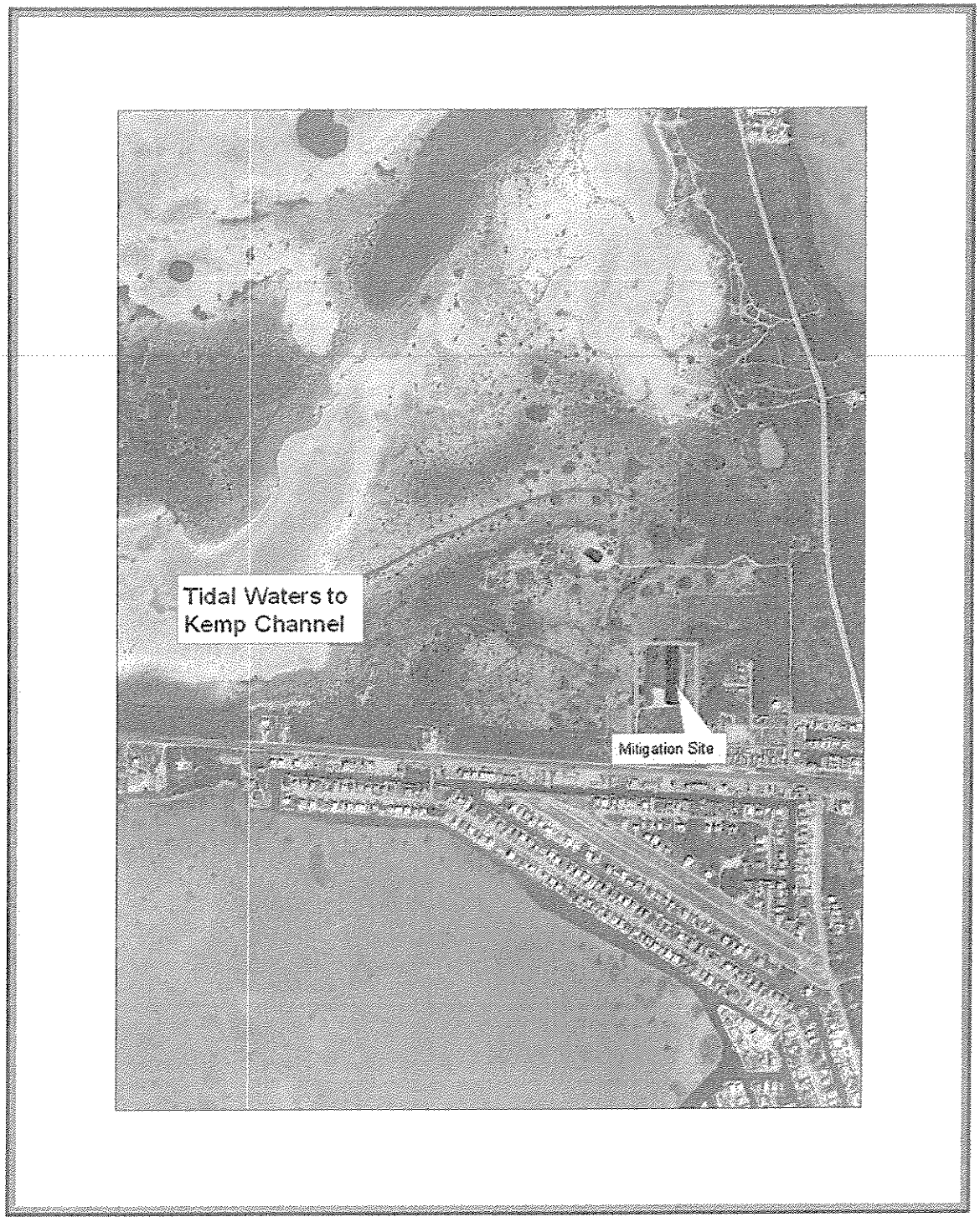


Figure 4. Location of the proposed restoration area showing the tidal connection to Kemp Channel located to the west of the mitigation site. The mitigation site receives regular tidal inundation and supports a well-developed red and black mangrove swamp community.

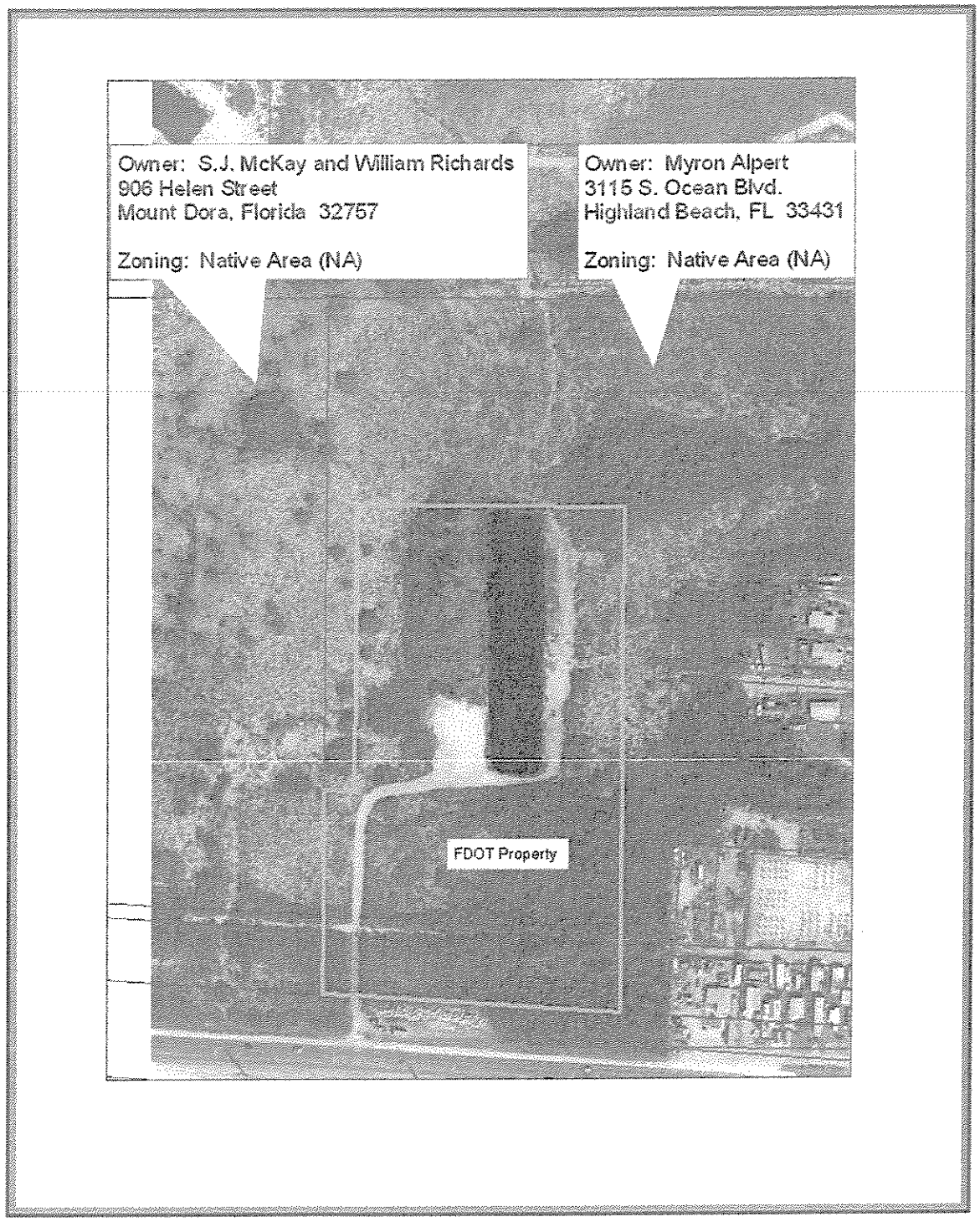


Figure 5. Location of the adjacent property owners and land use zoning of the parcels as per Monroe County.

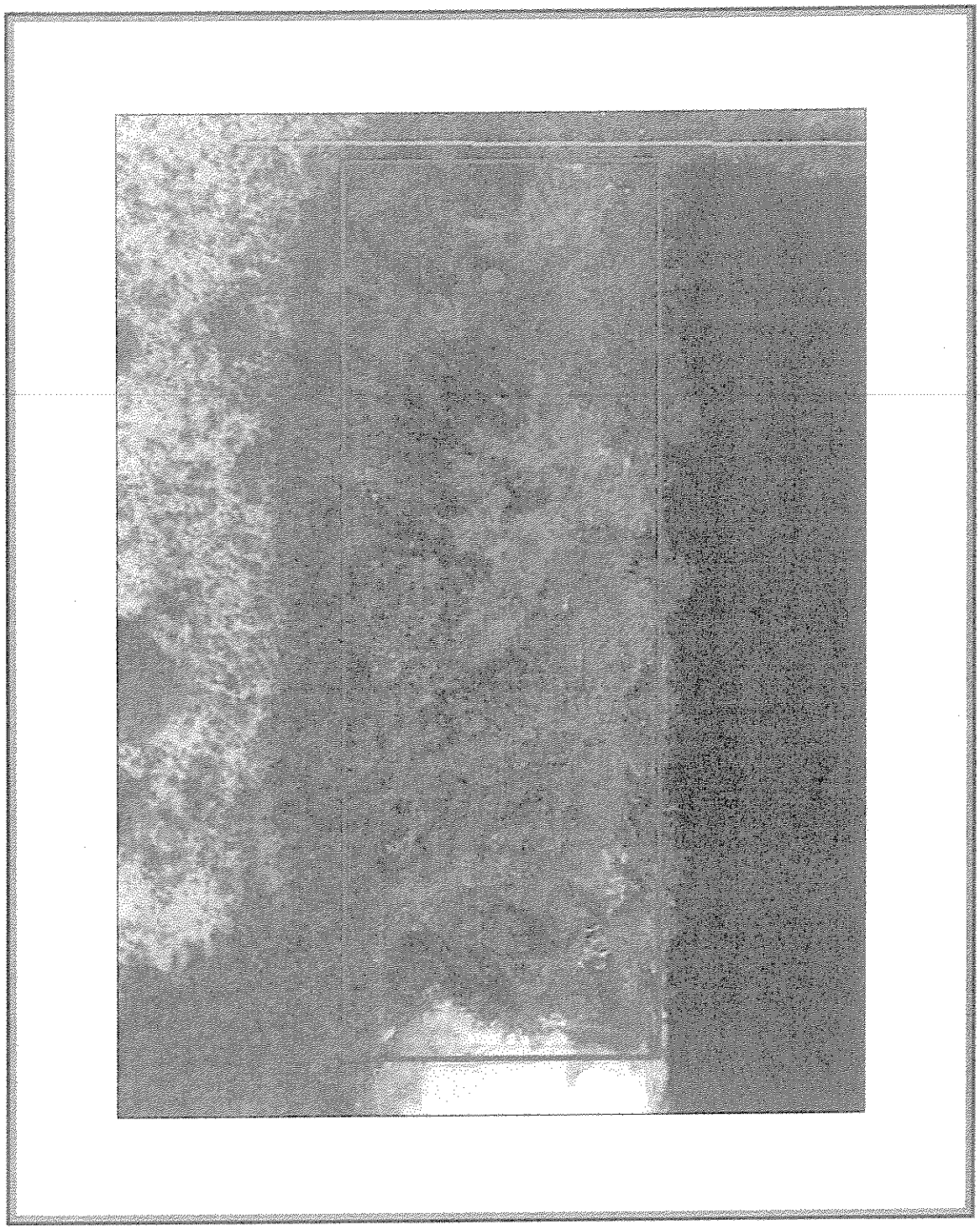
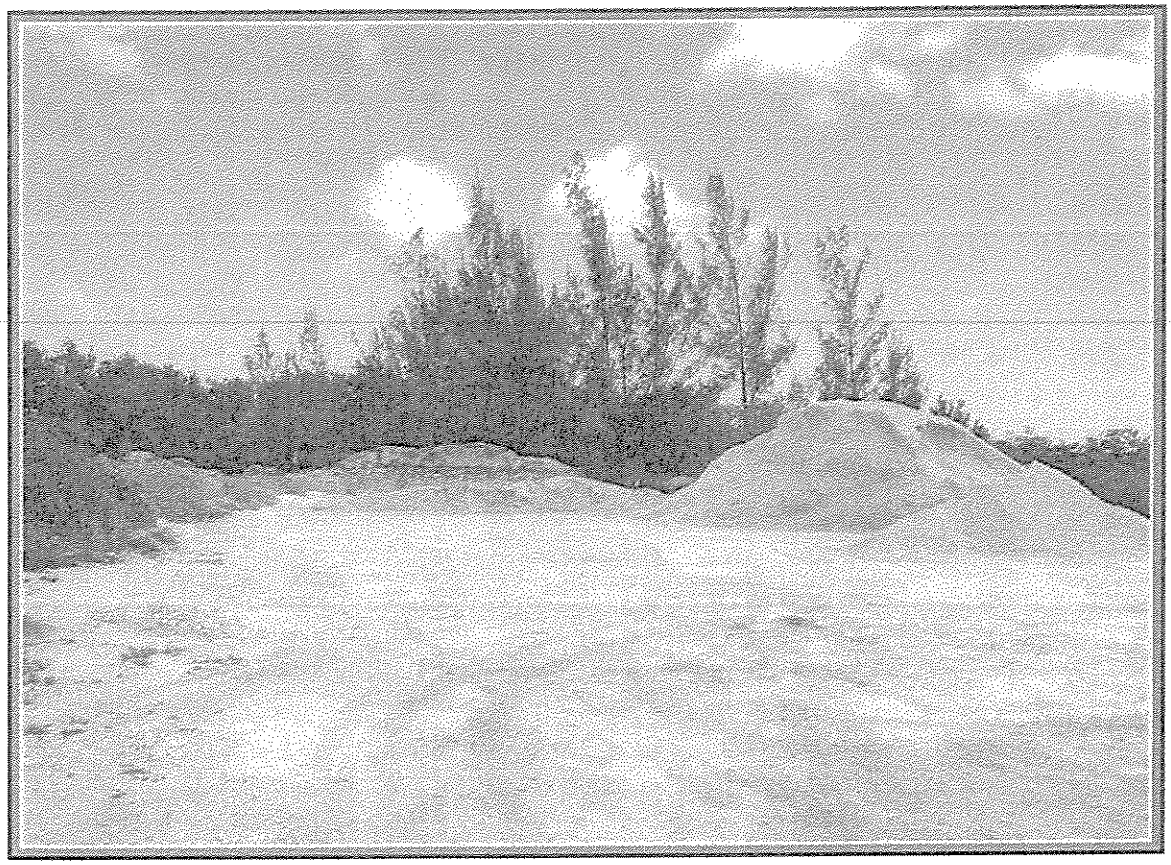


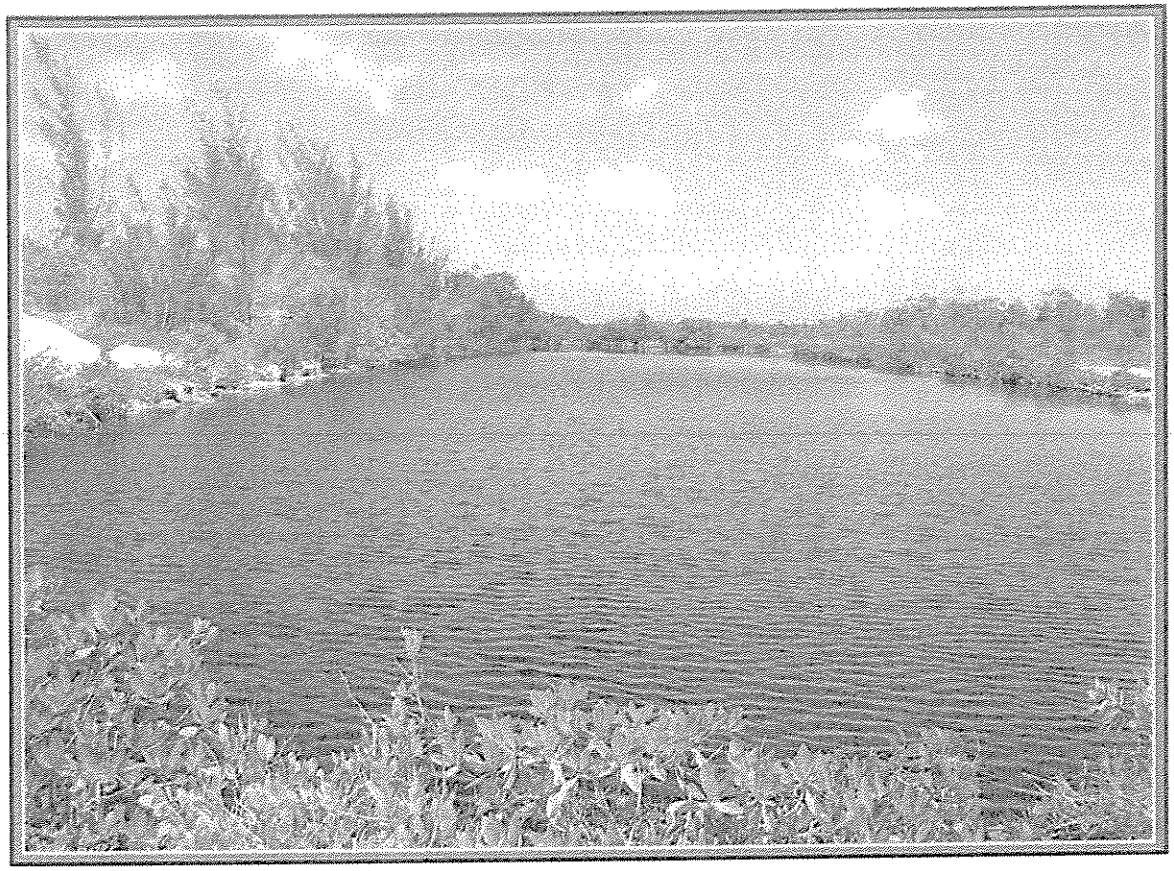
Figure 6. Location of the four mitigation monitoring stations on the mitigation area.

Attachment 1. Reference Photographs



Photograph taken March 26, 2007 showing the Florida Department of Transportation maintenance staging area located at Mile Marker 24.5, Summerland Key. This staging area will remain in use after the restoration is complete and will be used to stage for the restoration project. The mitigation site can be seen beyond the staging area.

Photograph taken March 26, 2007 showing the 0.93 acre upland spoil area that is colonized with a mixture of invasive exotic vegetation and native plants. This spoil mound is 10-15' in height and composed mainly of limerock excavated from the adjacent borrow pit.

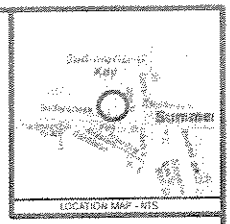


Photograph taken March 26, 2007 showing the 0.93 acre upland spoil area visible to the left of the borrow pit in this photo. This spoil mound is 10-15' in height and composed mainly of limerock excavated from the adjacent borrow pit.

Photograph taken March 26, 2007 showing the red and black mangrove wetlands located immediately to the west of the proposed mitigation site. Target elevations for the restoration of the 0.93 acre upland spoil area were taken from this wetland.

Attachment 2. Topographical and mean high water surveys

MAP OF TOPOGRAPHIC SURVEY
A PARCEL OF LAND IN SEC. 26
T. 66 SOUTH, R. 28 EAST
SUMMERLAND KEY
MONROE COUNTY, FLORIDA



UNDISTURBED AREA

AREA OF LOOSE FILL

AREA OF COMPACTED FILL

40,580 sq. ft
0.93 acres

47,400 sq. ft
1.09 acres

19,600 sq. ft
0.45 acres

PROPOSED LANDING PAD

BENCHMARK
SET 5" IR & CAP
LB #6884, TRAVERSE
EL. +2.05', NGVD'29

WATER EL. TAKEN
ON 10-15-07
AT 3:15 P.M.

COMPACTED FILL DRIVE

SCALE: 1" = 100'
BEARING BASE:
DERIVED FROM PLAT

ALL ANGLES DEPICTED
ARE 90 DEGREES UNLESS
OTHERWISE INDICATED

ADDRESS:
30001 U.S. HIGHWAY NO. 1
SUMMERLAND KEY, FL
33042

ELEVATIONS SHOWN
A.S.L. X.Xx REFER TO
NGVD 1929 VERTICAL
DATUM ABOVE SEALEVEL

LEGAL DESCRIPTION:
N/A

CERTIFIED TO:
FLORIDA DEPARTMENT OF TRANSPORTATION
CONSULTING ENGINEERING & SCIENCE, INC.

R.E. REECE, P.A.
PROFESSIONAL SURVEYOR AND MAPPER
30304 OVERSEAS TRAIL, BIG PINE KEY, FL 33043
OFFICE (305) 872 - 1346
FAX (305) 872 - 5622

APPRAISAL MAP

FLORIDA KEYS ECOSYSTEM
SUMMERLAND KEY (North of US 1)
MULTIPLE

IN SECTIONS 14, 23, 25, 26, 27 & 35, TOWNSHIP 66 SOUTH, RANGE 28 EAST
MONROE COUNTY, FLORIDA

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APPRAISAL MAP	SHEET 5 OF 25
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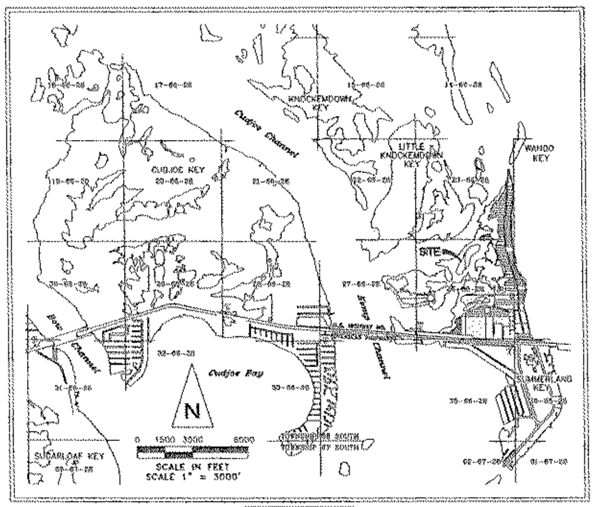
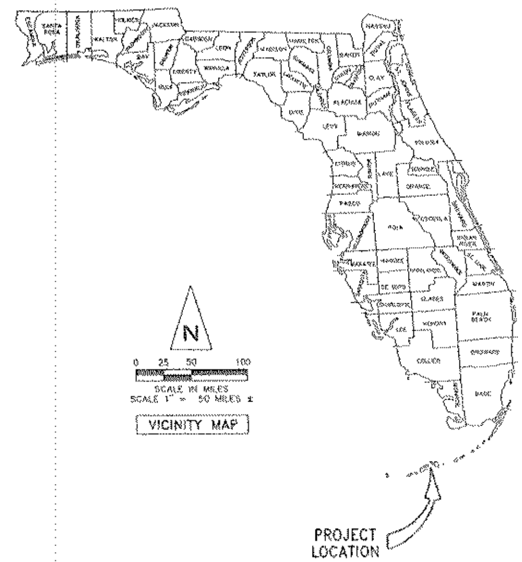
HABITAT DELINEATION ON AERIAL PHOTOGRAPHY	SHEET 23 OF 25
HABITAT DELINEATION ON AERIAL PHOTOGRAPHY	SHEET 24 OF 25
HABITAT DELINEATION ON AERIAL PHOTOGRAPHY	SHEET 25 OF 25



LOCATION MAP



VICINITY MAP

SURVEYOR'S NOTES:

1. THIS MAP HAS BEEN PREPARED FOR THE PURPOSE OF VALUE APPRAISAL ONLY AND DOES NOT CONSTITUTE A BOUNDARY SURVEY OF THE PREMISES.
2. BOUNDARY INFORMATION SHOWN HEREON IS A COMPILATION AND INTERPRETATION OF LOCAL SURVEY DATA, HISTORICAL RECORDS, DEEDS AND PLATS OF RECORD.
3. OWNERSHIP AND OTHER REFERENCE INFORMATION WAS PROVIDED BY AMERICAN GOVERNMENT SERVICES CORPORATION FROM TITLE SEARCHES DATED NOVEMBER 2004 THROUGH JANUARY 2005.
4. THE APPROXIMATE MEAN HIGH WATER LINE AS SHOWN HEREON HAS BEEN DIGITALLY REPRODUCED FROM MAPS PROVIDED BY THE BUREAU OF SURVEYING AND MAPPING IN THE FORM OF LINE DRAWINGS ON AERIAL PHOTOGRAPHY, AS SURVEYED BY MARK A. STOKES, PSM, OF BERRYMAN & HENIGAR, INC. DURING THE MONTHS OF SEPTEMBER THROUGH OCTOBER OF 2004.
5. HABITAT DELINEATION HAS BEEN IDENTIFIED IN THE FIELD BY ROWENA P. GARCIA OF TERRAMAR ENVIRONMENTAL SERVICES, INC., AND PLOTTED ON NON-RECTIFIED AERIAL PHOTOGRAPHY AS PROVIDED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION. THE LINE DRAWINGS HAVE BEEN DIGITALLY REPRODUCED BY LOMBARDO SKIPPER AND FOLEY, INC. FOR USE IN THIS APPRAISAL MAP. ACREAGE FOR HABITAT AREAS ARE APPROXIMATE ONLY AND SUBJECT TO FIELD VERIFICATION.
6. AN OWNERSHIP REPORT HAS BEEN PREPARED AND DELIVERED CONTEMPORANEOUS TO THIS APPRAISAL MAP. THIS REPORT CONTAINS THE NAME AND ADDRESS OF THE CURRENT OWNER, LEGAL DESCRIPTION OF THE PARCEL, HABITAT ACREAGE CALCULATIONS AND GENERAL COMMENTS FOR EACH PARCEL. PLEASE REFER TO THIS REPORT FOR ADDITIONAL INFORMATION.

SURVEYOR'S CERTIFICATE:

THIS APPRAISAL MAP, PREPARED UNDER MY DIRECTION, COMPILED FROM THE SOURCES INDICATED HEREON BY THE METHODS DESCRIBED, IS INTENDED TO BE USED FOR APPRAISAL PURPOSES ONLY AND IN NO WAY REPRESENTS A FIELD SURVEY OF THE LANDS DEPICTED HEREON.

APRIL 15, 2005
DATE OF CERTIFICATE

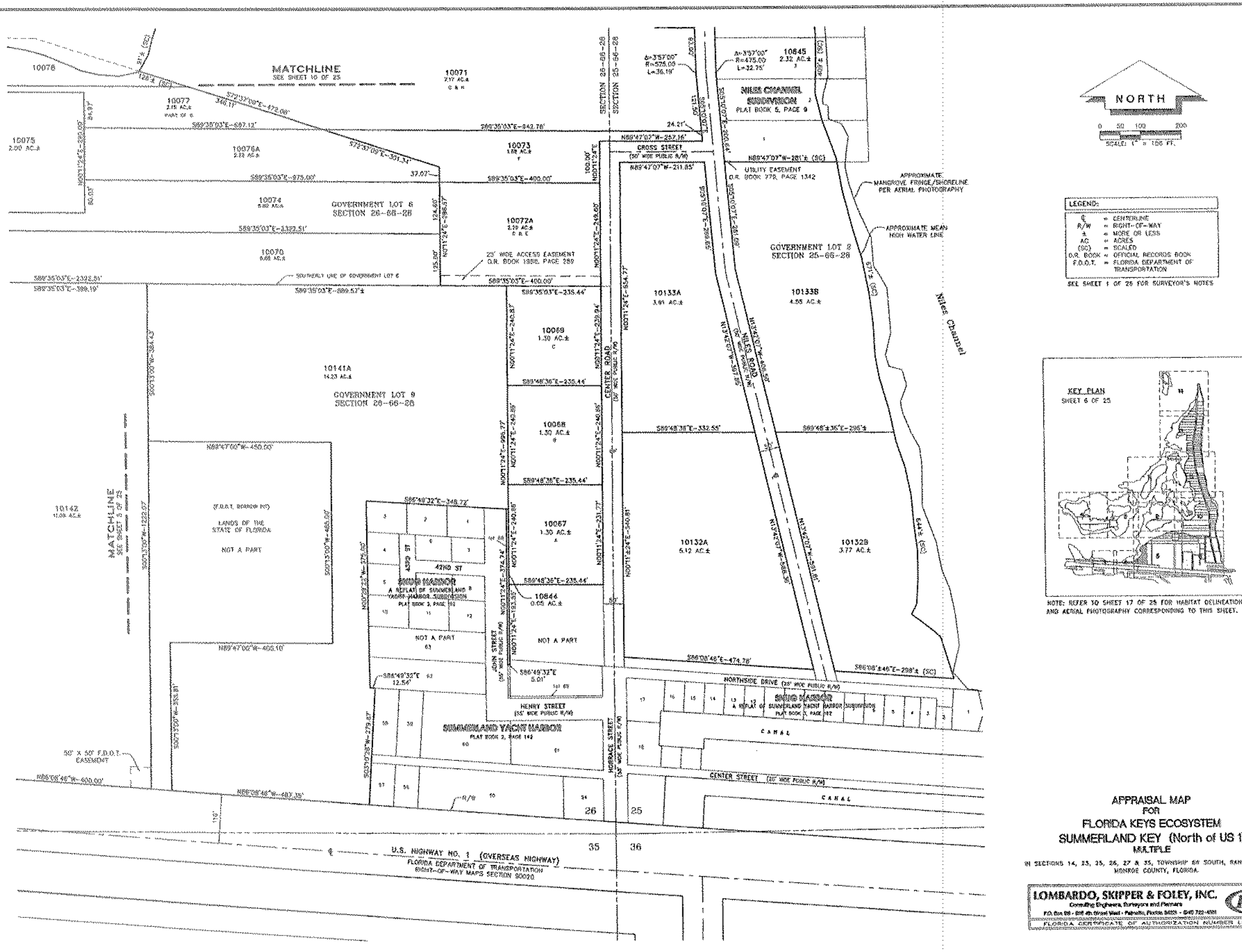
KENNETH C. KOLMAN
PROFESSIONAL SURVEYOR & MAPPER
FLORIDA CERTIFICATE NUMBER 5116

NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER.

LOMBARDO, SKIPPER & FOLEY, INC.
Consulting Engineers, Surveyors and Planners
FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER LB 2241

SHEET NO 1 OF 25	PROJECT TITLE: APPRAISAL MAP FLORIDA KEYS ECOSYSTEM SUMMERLAND KEY (North of US 1) MULTIPLE	COUNTY: MONROE	DWG. DATE: 04/19/05	
		SEC. TWP. 66 RGE. 28	PHOTO DATE: N/A	
		OFF. NO.	DRAWN BY: T.BALL	
		DWG. NAME: SUMMERCY	CHECKED BY: AL/KCK	
REVISION	DATE	REVISION	DATE	

DEPT. of ENVIRONMENTAL PROTECTION
BUREAU of SURVEY and MAPPING
3900 COMMONWEALTH BLVD. TALLAHASSEE, FL 32399
(850) 488-2427



LEGEND:

℄	= CENTERLINE
R/W	= RIGHT-OF-WAY
±	= MORE OR LESS
AC	= ACRES
(SC)	= SCALED
O.R. BOOK	= OFFICIAL RECORDS BOOK
F.D.O.T.	= FLORIDA DEPARTMENT OF TRANSPORTATION

SEE SHEET 1 OF 25 FOR SURVEYOR'S NOTES

NOTE: REFER TO SHEET 17 OF 25 FOR HABITAT DELINEATION AND AERIAL PHOTOGRAPHY CORRESPONDING TO THIS SHEET.

APPRAISAL MAP FOR FLORIDA KEYS ECOSYSTEM SUMMERLAND KEY (North of US 1)

MULTIPLE

IN SECTIONS 14, 23, 25, 26, 27 & 35, TOWNSHIP 66 SOUTH, RANGE 28 EAST MONROE COUNTY, FLORIDA.

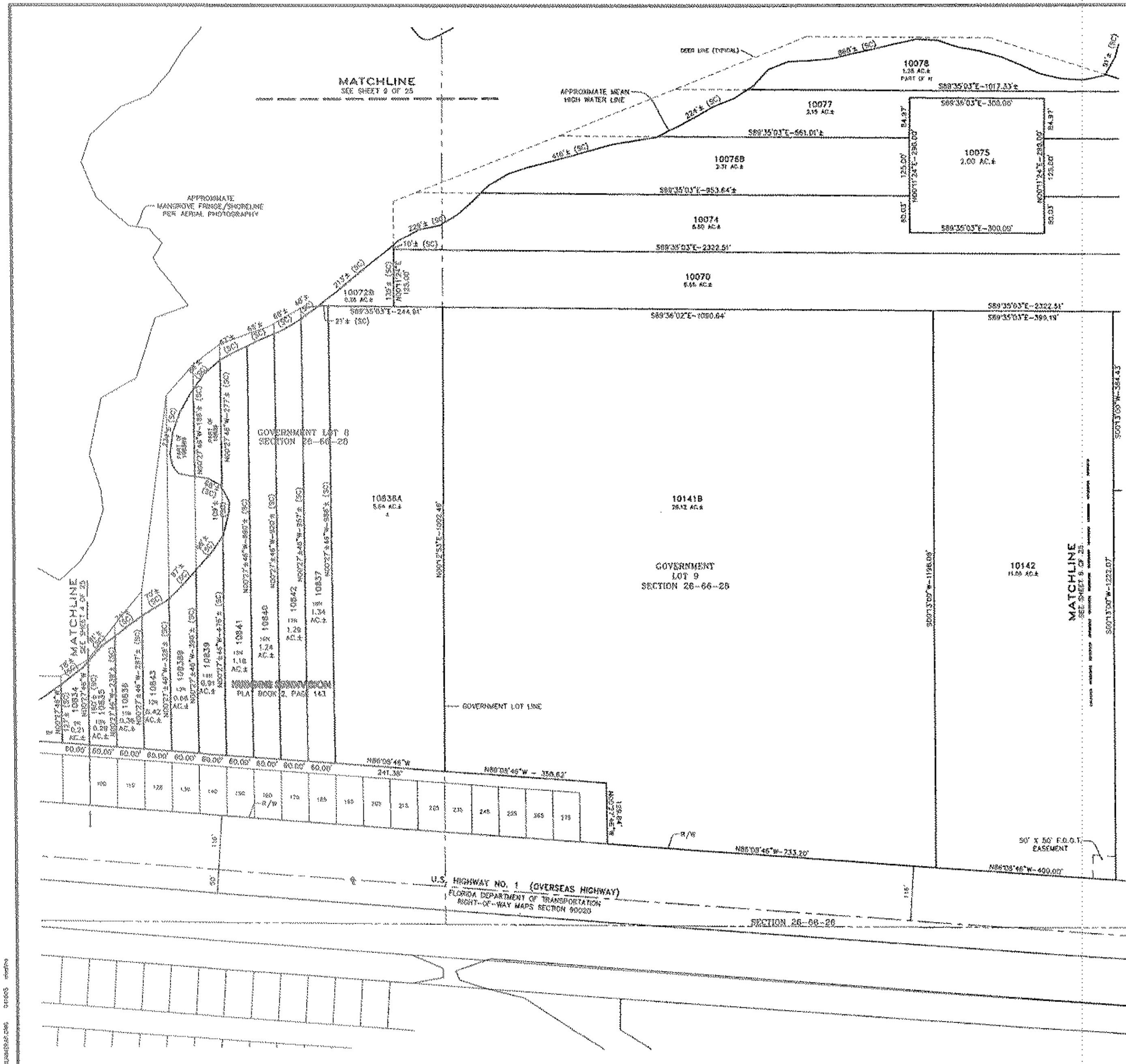
LOMBARDO, SKIPPER & FOLEY, INC.
Consulting Engineers, Surveyors and Planners
FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER LB 2241

DEPT. of ENVIRONMENTAL PROTECTION
BUREAU of SURVEY and MAPPING
3900 COMMONWEALTH BLVD. TALLAHASSEE, FL 32399
(850) 488-2427

COUNTY: MONROE	DWG. DATE: 04/18/05	REVISION	DATE
SEC: TWP-66S RGE-28E	PHOTO DATE: 2003	REVISION	DATE
DEPT. NO.:	DRAWN BY: TLB		
DWG. NAME: SUMMERAP	CHECKED BY: AL/JCK		

PROJECT TITLE: APPRAISAL MAP FLORIDA KEYS ECOSYSTEM SUMMERLAND KEY (North of US 1) MULTIPLE

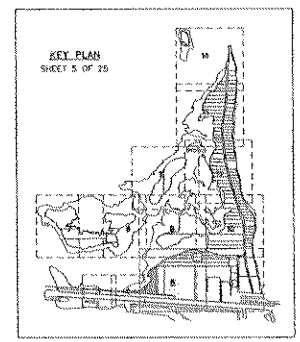
SHEET NO. 6 of 25



LEGEND:

℄	= CENTERLINE
R/W	= RIGHT-OF-WAY
±	= MORE OR LESS
AC.	= ACRES
(SC)	= SCALED
O.R. BOOK	= OFFICIAL RECORDS BOOK
F.D.O.T.	= FLORIDA DEPARTMENT OF TRANSPORTATION

SEE SHEET 1 OF 25 FOR SURVEYOR'S NOTES



NOTE: REFER TO SHEET 16 OF 25 FOR HABITAT DELINEATION AND AERIAL PHOTOGRAPHY CORRESPONDING TO THIS SHEET.

APPRAISAL MAP FOR FLORIDA KEYS ECOSYSTEM SUMMERLAND KEY (North of US 1)

MULTIPLE

IN SECTIONS 14, 23, 25, 26, 27 & 35, TOWNSHIP 66 SOUTH, RANGE 28 EAST MONROE COUNTY, FLORIDA.

LOMBARDO, SKIPPER & FOLEY, INC.
Consulting Engineers, Surveyors and Planners
FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER LB 2241

COUNTY: MONROE | DWG. DATE: 04/18/05
SEC: TWP. 66S. RGE. 28E. | PHOTO DATE: 2003
CPT. NO.: | DRAWN BY: TLS
DWG. NAME: SUMMERMAP | CHECKED BY: AL/KCK

PROJECT TITLE: APPRAISAL MAP FLORIDA KEYS ECOSYSTEM SUMMERLAND KEY (North of US 1) MULTIPLE

SHEET NO. 5 of 25

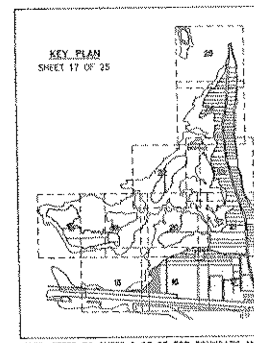
DEPT. of ENVIRONMENTAL PROTECTION
BUREAU of SURVEY and MAPPING
3900 COMMONWEALTH BLVD. TALLAHASSEE, FL 32399
(850) 488-2427

NORTH

0 50 100 200
SCALE: 1" = 100 FT.

LEGEND:	
±	= MORE OR LESS
AC	= OFFICIAL RECORDS BOOK
------	= HABITAT LINE
633	= HABITAT TYPE

SEE SHEET 1 OF 25 FOR SURVEYOR'S NOTES



NOTE: REFER TO SHEET 6 OF 25 FOR BOUNDARY AND OTHER APPRAISAL INFORMATION CORRESPONDING TO THIS SHEET

APPRAISAL MAP
FOR
FLORIDA KEYS ECOSYSTEM
SUMMERLAND KEY (North of US 1)
MULTIPLE

IN SECTIONS 14, 23, 25, 26, 27 & 35, TOWNSHIP 66 SOUTH, RANGE 28 EAST
MONROE COUNTY, FLORIDA

LOMBARDO, SKIPPER & FOLEY, INC.
Consulting Engineers, Surveyors and Planners
FLORIDA CERTIFICATE OF AUTHORIZATION NUMBER LB 3241

DEPT. of ENVIRONMENTAL PROTECTION
BUREAU of SURVEY and MAPPING
3900 COMMONWEALTH BLVD. TALLAHASSEE, FL 32399
(850) 488-2427

REVISION	DATE	REVISION	DATE

COUNTY: MONROE
SEC: TWP: RGE: PHOTO DATE: 2003
OFF. NO.: DRAWN BY: S.B.
DWG. NAME: SUMMERKM CHECKED BY: AL/KCK
DWG. DATE: 04/18/05

SHEET NO. 17 OF 25

PROJECT TITLE: APPRAISAL MAP
FLORIDA KEYS ECOSYSTEM
SUMMERLAND KEY (North of US 1)
MULTIPLE

Attachment 3. UMAM assessment

PART I – Qualitative Description
(See Section 62-345.400, F.A.C.)

Site/Project Name	Application Number	Assessment Area Name or Number
US 1 / SR-5 Hurricane Erosion Repair Project	SFWMD 070507-10	Summerland Borrow Pit - Upland

FLUCCs code	Further classification (optional)	Impact or Mitigation Site?	Assessment Area Size
7430 – spoil areas		Mitigation Site	0.93 acres

Basin/Watershed Name/Number	Affected Waterbody (Class)	Special Classification (i.e.OFW, AP, other local/state/federal designation of importance)
Florida Bay	III	Outstanding Florida Waters

Geographic relationship to and hydrologic connection with wetlands, other surface water, uplands

The site is adjacent to a mangrove wetland system that is connected to waters of the Gulf of Mexico. The assessment area is adjacent to an mostly intact area of mangrove, salt marsh and hardwood hammock habitats. The site is also adjacent to a 1.09 acre man-made borrow pit and 0.30 acre upland staging area for used for FDOT maintainence.

Assessment area description

Site is a historic mangrove and salt marsh community that was filled for limerock extraction. The area consists of limerock fill material placed in a historic wetland. The vegetation present is a mixture of invasive exotic vegetation and native vegetation. The elevations have been altered on the site to preclude normal hydrology; the site is entirely upland.

Significant nearby features	Uniqueness (considering the relative rarity in relation to the regional landscape.)
Gulf of Mexico and the Florida Keys National Marine Sanctuary.	**This site is a disturbed upland adjacent to a natural mangrove wetland and a man-made borrow pit. Disturbed areas adjacent to wetlands are common features in the Florida Keys.**
Functions **The site consists of scarified, hardened limerock with minimal ecological function.**	Mitigation for previous permit/other historic use **None**
Anticipated Wildlife Utilization Based on Literature Review (List of species that are representative of the assessment area and reasonably expected to be found) **The area has minimal habitat value for wildlife. Occassional bird use of the extreme margins of the assessment area may occur, and would include wading birds.**	Anticipated Utilization by Listed Species (List species, their legal classification (E, T, SSC), type of use, and intensity of use of the assessment area) None

Observed Evidence of Wildlife Utilization (List species directly observed, or other signs such as tracks, droppings, casings, nests, etc.):

None

Additional relevant factors:

Mangrove and salt marsh wetlands are an important ecosystem, and are under increasing development pressure and illegal activities such as dumping and descruction of vegetation that degrade the functions of these communities. Restoring mangrove wetlands will provide essential habitat in perpetuity.

Assessment conducted by:	Assessment date(s):
Philip A. Frank	4/9/2007

PART II – Quantification of Assessment Area

Site/Project Name	Application Number	Assessment Area Name or Number
US 1 / SR-5 Hurricane Erosion Repair Project	SFWMD 070507-10	Summerland Borrow Pit - Upland
Impact or Mitigation	**Assessment conducted by:**	**Assessment date:**
Mitigation	Philip A. Frank	11/16/07

Scoring Guidance	Optimal (10)	Moderate(7)	Minimal (4)	Not Present (0)
The scoring of each indicator is based on what would be suitable for the type of wetland or surface water assessed	Condition is optimal and fully supports wetland/surface water functions	Condition is less than optimal, but sufficient to maintain most wetland/surface waterfunctions	Minimal level of support of wetland/surface water functions	Condition is insufficient to provide wetland/surface water functions

		w/o pres or current	with
.500(6)(a) Location and Landscape Support	The assessment area is adjacent to a large expanse of native habitat including mangrove, salt marsh, and hardwood hammock. The restoration of the assessment area will improve landscape support by increasing the total amount of mangrove wetlands and eliminating a disturbed area adjacent to a natural area. The AA is presently disturbed, filled uplands with elevations ranging from 8-16 feet above sea level. For uplands proposed to be converted to wetlands through restoration, upland areas are scored as "zero" for current conditions; only the "with mitigation" assessment is scored.	0	8
.500(6)(b)Water Environment (n/a for uplands)	The assessment area is a historic mangrove and salt marsh community that was filled for limerock extraction. The elevations have been altered to preclude normal hydrology; the majority of the site is upland. Restoration of the assessment area through removal of fill and re-creation of natural elevations will enhance hydrology on the site and result in the restoration of a mangrove wetland community. The AA is presently disturbed, filled uplands with elevations ranging from 8-16 feet above sea level. For uplands proposed to be converted to wetlands through restoration, upland areas are scored as "zero" for current conditions; only the "with mitigation" assessment is scored.	0	8
.500(6)(c)Community structure 1. Vegetation and/or 2. Benthic Community	Site is a historic mangrove and salt marsh community that was filled for limerock extraction. The vegetation on the assessment area consists of an overstory of Australian pine trees with native vegetation scattered in the understory including buttonwood, poisonwood, locustberry and wild lantana. Restoration of the assessment area through the removal of fill and planting of appropriate wetland plants will result in the restoration of the native mangrove wetland plant community. The AA is presently disturbed, filled uplands with elevations ranging from 8-16 feet above sea level. For uplands proposed to be converted to wetlands through restoration, upland areas are scored as "zero" for current conditions; only the "with mitigation" assessment is scored.	0	8
	SUM	0	24

Score = sum of above scores/30 (if uplands, divide by 20)	current or w/o pres	with
	0	0.8

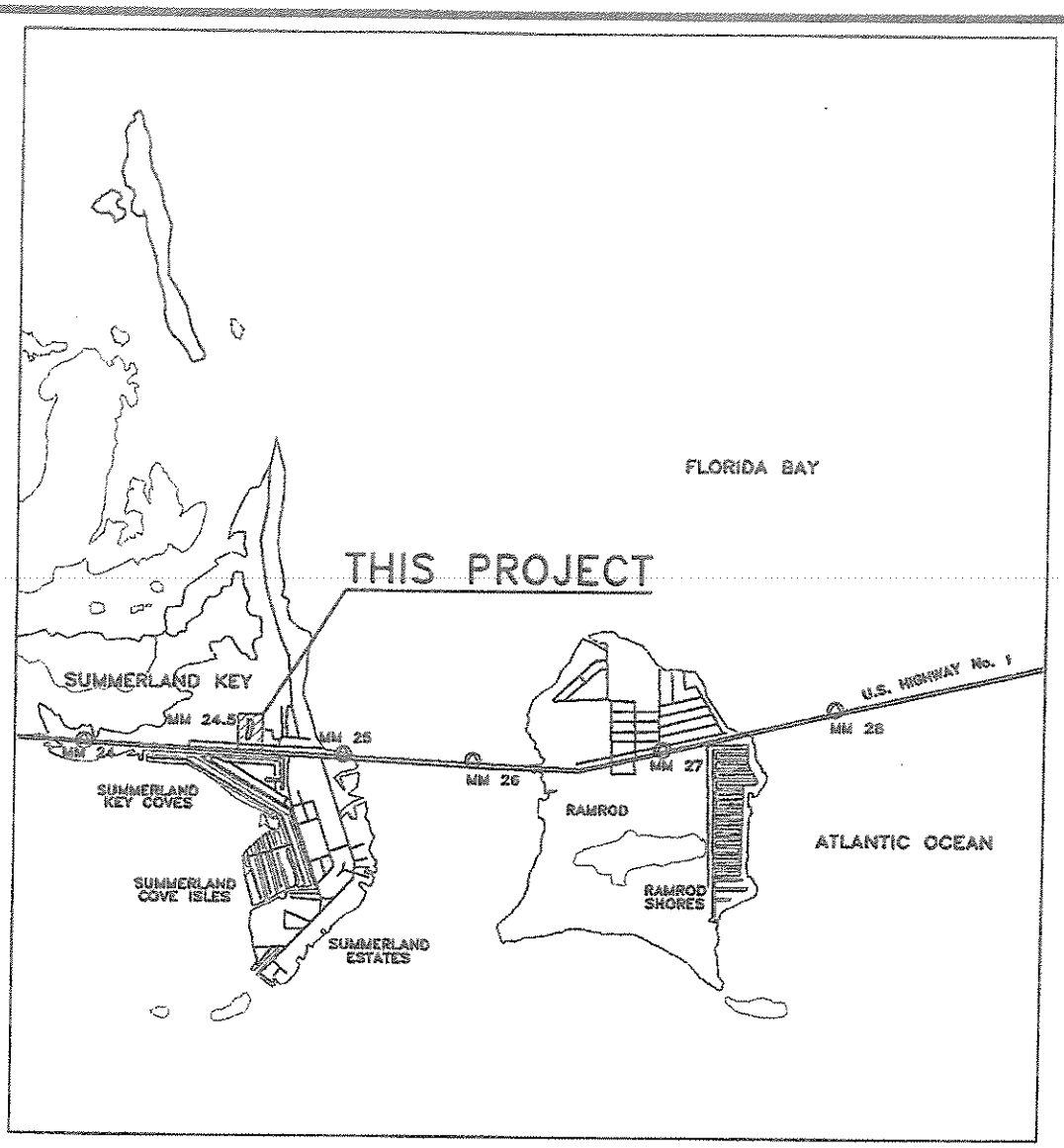
If preservation as mitigation,
Preservation adjustment factor (PAF) =
Adjusted mitigation delta (AMD) =

Preservation Credits
RFG = 0.80 / (1.14 x 1.5) = 0.46 Credits - 0.46 x 0.93 ac = 0.435

Delta = [with-current]
0.8

RFG = Mitigation Delta / (t-factor x risk) ; Credits = RFG x ACRES
T-Factor was scored at FIVE YEARS = 1.14 and RISK was scored at 1.5

Attachment 4. Mitigation construction and erosion control plans



VICINITY MAP

N.T.S.

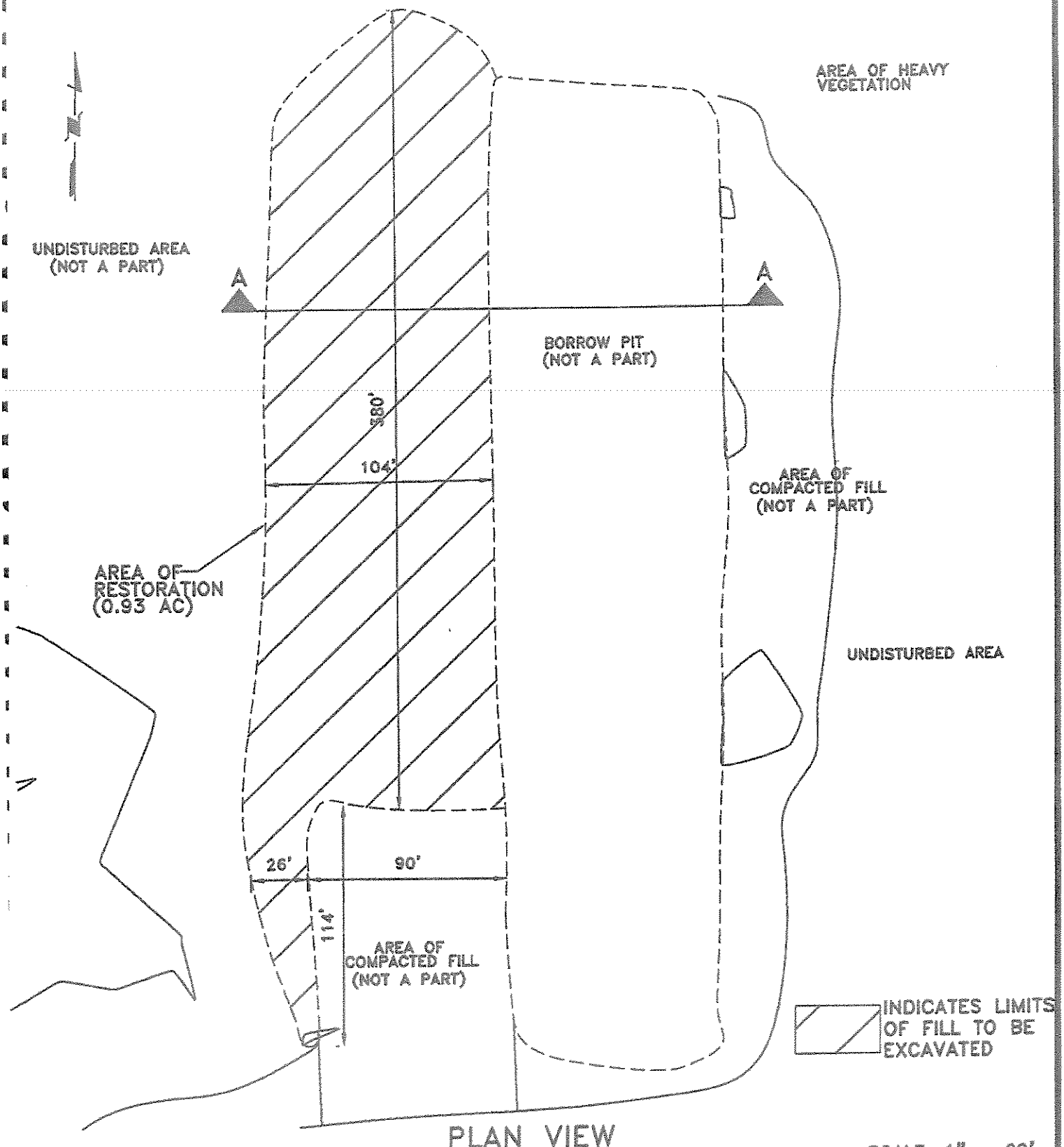
SHT. No.	TITLE
1	VICINITY MAP & INDEX OF DRAWINGS
2	PLAN VIEW
3	CROSS SECTION A-A

PURPOSE: VINCINITY MAP & INDEX OF DRAWINGS
DATUM: N/A
PREPARED BY:
Consulting Engineering & Science, Inc.
8925 S.W. 148th Street, Suite 100
Miami, Florida 33176

COUNTY OF MONROE, STATE OF FLORIDA
APPLICATION BY:
Florida Department of Transportation
1000 N.W. 111th Avenue
Miami, Florida 33172

SHEET 1 OF 3

DATE: 11-20-07



PLAN VIEW

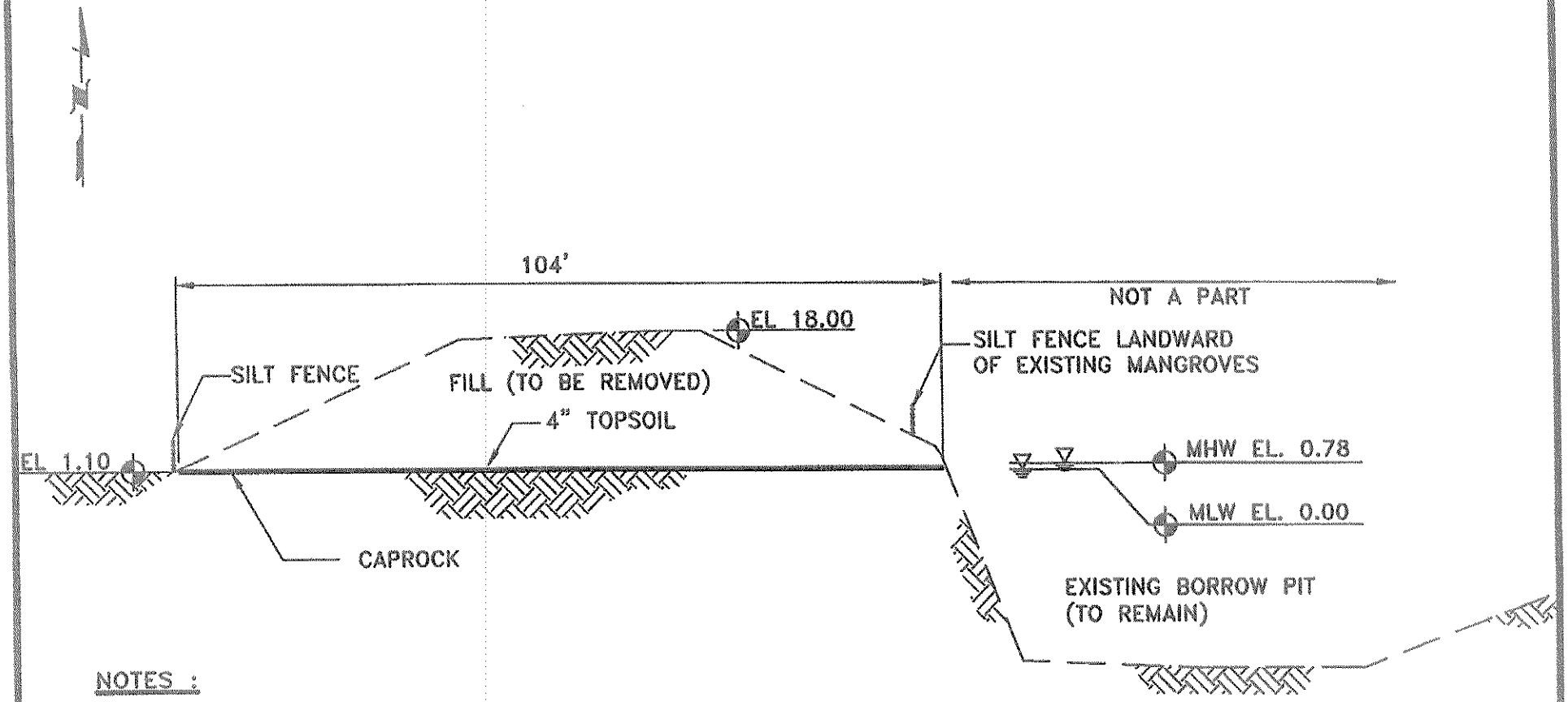
SCALE: 1" = 60'

PURPOSE: PLAN VIEW
DATUM: N.G.V.D.
PREPARED BY:
Consulting Engineering & Science, Inc.
8925 S.W. 148th Street, Suite 100
Miami, Florida 33176

COUNTY OF MONROE, STATE OF FLORIDA
APPLICATION BY:
Florida Department of Transportation
1000 N.W. 111th Avenue
Miami, Florida 33172

SHEET 2 OF 3

DATE: 11-20-07



NOTES :

1. SILT FENCE SHALL BE INSTALLED AROUND PROJECT AREA PRIOR TO CONSTRUCTION
2. REMOVE 9,400 CY OF FILL TO CAPROCK APPOXIMATE EL. 1.10
3. PLACE 4-INCHES OF TOPSOIL ON CAPROCK AFTER FILL REMOVAL
4. INSTALL MANGROVE SEEDLINGS IN TOPSOIL

SECTION A-A

(LOOKING NORTH)

SCALE: 1" = 20'

PURPOSE: CROSS SECTION A-A
DATUM: N.G.V.D.
PREPARED BY:
Consulting Engineering & Science, Inc.
8925 S.W. 148th Street, Suite 100
Miami, Florida 33176

COUNTY OF MONROE, STATE OF FLORIDA
APPLICATION BY:
Florida Department of Transportation
1000 N.W. 111th Avenue
Miami, Florida 33172

SHEET 3 OF 3

DATE: 11-27-07

SPECIAL CONDITIONS

1. The construction phase of this permit shall expire on March 20, 2013.
2. Operation of the surface water management system shall be the responsibility of FLORIDA DEPARTMENT OF TRANSPORTATION.
3. The permittee shall be responsible for the correction of any erosion, shoaling or water quality problems that result from the construction or operation of the surface water management system.
4. Measures shall be taken during construction to insure that sedimentation and/or turbidity violations do not occur in adjacent wetlands and surface waters.
5. The District reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.
6. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.
7. The permittee shall provide routine maintenance of all of the components of the surface water management system in order to remove all trapped sediments/debris. All materials shall be properly disposed of as required by law. Failure to properly maintain the system may result in adverse flooding conditions.
8. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse water resource related impacts will not be caused by the completed permit activity. Should any adverse impacts caused by the completed surface water management system occur, the District will require the permittee to provide appropriate mitigation to the District or other impacted party. The District will require the permittee to modify the surface water management system, if necessary, to eliminate the cause of the adverse impacts.
9. The permittee acknowledges, that pursuant to Rule 40E-4.101(2), F.A.C., a notice of Environmental Resource or Surface Water Management Permit may be recorded in the county public records. Pursuant to the specific language of the rule, this notice shall not be considered an encumbrance upon the property.
10. Prior to the permittee instituting any future changes not authorized by this permit, the permittee shall notify the District of such intentions for a determination of any necessary permit modifications.
11. Any barge activity shall occur only in areas where at least one-foot bottom clearance is maintained at all times.
12. Any proposed revisions to the permitted work schedules shown on Exhibit No. 7 must include documentation that mitigation work will be completed prior to or concurrently with authorized wetland impacts.
13. All contractors must be provided with a copy of the staff report and permit conditions prior to the commencement of construction. The permittee is responsible for ensuring that all contractors adhere to the project construction details and methods indicated on the attached permit Exhibits and described herein.
14. Mangrove trimming is limited to miminal lateral trimming of select branches hanging over the proposed work areas. All mangrove trimming activities shall be accomplished in accordance with the Mangrove Trimming and Preservation Act (Sections 403.9321-403.9333 Florida Statutes).
15. No construction dewatering is authorized.
16. Four (4) permanent physical markers designating the preserve status of the wetland preservation area

SPECIAL CONDITIONS

shall be placed as shown on Exhibit No. 4. The markers shall be maintained in perpetuity.

17. The successful completion of the wetland mitigation plan is heavily dependent on proper site grading as shown in Exhibit 4. The mitigation area will not be excavated below natural caprock. In addition, once all fill material is excavated from the mitigation site, any remaining loose fill rubble material will be "raked" and removed from the site.

18. The permittee shall instruct all personnel associated with the project of the potential presence of manatees and the need to avoid collisions with manatees. All construction personnel are responsible for observing water-related activities for the presence of manatee(s).

The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act of 1972, The Endangered Species Act of 1973, and the Florida Manatee Sanctuary Act.

Siltation barriers shall be made of material in which manatees cannot become entangled, are properly secured, and are regularly monitored to avoid manatee entrapment. Barriers must not block manatee entry to or exist from essential habitat.

All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

If manatee(s) are seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure protection of the manatee. These precautions shall include the operation of all moving equipment no closer than 50 feet of a manatee. Operation of any equipment closer than 50 feet to a manatee shall necessitate immediate shutdown of that equipment. Activities will not resume until the manatee(s) has departed the project area of its own volition.

Any collision with and/or injury to a manatee shall be reported immediately to the FWC Hotline at 1-888-404-FWCC. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-232-2580) for north Florida or Vero Beach (1-772-562-3909) in south Florida.

Temporary signs concerning manatees shall be posted prior to and during all construction/dredging activities. All signs are to be removed by the permittee upon completion of the project. A sign measuring at least 3 ft. by 4 ft. which reads Caution: Manatee Area will be posted in a location prominently visible to water related construction crews. A second sign should be posted if vessels are associated with the construction, and should be placed visible to the vessel operator. The second sign should be at least 81/2" by 11" which reads Caution: Manatee Habitat. Idle speed is required if operating a vessel in the construction area. All equipment must be shutdown if a manatee comes within 50 feet of operation. Collision and/or injury should also be reported to the U.S. Fish and Wildlife Service in Jacksonville (1-904-232-2580) for north Florida or Vero Beach (1-772-562-3909) in south Florida.

19. Endangered species, threatened species and/or species of special concern have been observed onsite and/or the project contains suitable habitat for these species. It shall be the permittee's responsibility to coordinate with the Florida Fish and Wildlife Conservation Commission and/or the U.S. Fish and Wildlife Service for appropriate guidance, recommendations and/or necessary permits to avoid impacts to listed species.

20. A stable, permanent and accessible elevation reference shall be established at the off-site wetland mitigation project site within the wetlands. The location of the elevation reference is identified within the approved wetland mitigation plan.

SPECIAL CONDITIONS

21. Within 90 days of issuance of this permit, and in accordance with the work schedule in Exhibit No. 7, the permittee shall submit two certified copies of the recorded conservation easement for the mitigation area and associated buffers. The data shall be supplied in a digital ESRI Geodatabase (mdb), ESRI Shapefile (shp) or AutoCAD Drawing Interchange (dxf) file format using Florida State Plane coordinate system, East Zone (3601), Datum NAD83, HARN with the map units in feet. This data shall be submitted as a paper map depicting the Conservation Easement over the best available satellite or aerial imagery. This data shall also reside on a CD or floppy disk and be submitted to the District's Environmental Resource Compliance Division in the service area office where the application was submitted.

    The recorded easement shall utilize the form attached as Exhibit 6. Any proposed modifications to the approved form must receive prior written consent from the District. The easement must be free of encumbrances or interests in the easement which the District determines are contrary to the intent of the easement. In the event it is later determined that there are encumbrances or interests in the easement which the District determines are contrary to the intent of the easement, the permittee shall be required to provide release or subordination of such encumbrances or interests.

22. The wetland conservation area shown in Exhibit 5 may in no way be altered from its natural or permitted state. Activities prohibited within the conservation areas include, but are not limited to:
    (a) construction or placing of buildings, roads, signs, billboards or other advertising, utilities or other structures on or above the ground;
    (b) dumping or placing soil or material as landfill or dumping or placing of trash, waste, or unsightly or offensive materials;
    (c) removal or destruction of trees, shrubs, or other vegetation - with the exception of exotic and nuisance vegetation removal;
    (d) excavation, dredging, or removal of loam, peat, gravel, soil, rock, or other material substances in such manner as to affect the surface;
    (e) surface use except for purposes that permit the land or water area to remain predominantly in its natural condition;
    (f) activities detrimental to drainage, flood control, water conservation, erosion control, soil conservation, or fish and wildlife habitat preservation, including but not limited to ditching, diking or fencing;
    (g) acts or uses detrimental to such retention of land or water areas; and
    (h) acts or uses detrimental to the preservation of the structural integrity or physical appearance of sites or properties of historical, architectural, archaeological, or cultural significance.

23. In accordance with Exhibit No. 7, the permittee shall provide to the District the fully executed and recorded document depicted in Exhibit No. 5 to this staff report by June 21, 2008.

24. A maintenance program shall be implemented in accordance with Exhibit No. 4 for the restored wetland area on a regular basis to ensure the integrity and viability of those areas as permitted. Maintenance shall be conducted in perpetuity to ensure that the conservation area is maintained free from Category 1 exotic vegetation (as defined by the Florida Exotic Pest Plant Council at the time of permit issuance) immediately following a maintenance activity. Coverage of exotic and nuisance plant species shall not exceed 5% of total cover between maintenance activities. In addition, the permittee shall manage the conservation areas such that exotic/nuisance plant species do not dominate any one section of those areas.

25. Prior to placement of fill material (i.e. limestone rubble and boulder riprap) within surface waters, FDOT will "wash down" the fill material with water to minimize potential turbidity caused by fine sediments/particles, and will contain the "wash down" discharge on the uplands.

26. A baseline wetland mitigation monitoring report shall be submitted in accordance with Exhibit No. 4.

27. A Letter Modification of the permit from the District demonstrating compliance with the mitigation project design is required for each application for allocation of surplus functional gain for FDOT off-site projects.

SPECIAL CONDITIONS

28. The off-site mitigation plan shall be implemented in accordance with Exhibit No. 4. The permittee shall restore 0.93 acre of wetland area.

29. The District reserves the right to require remedial measures to be taken by the permittee if monitoring or other information demonstrates that adverse impacts to onsite or offsite wetlands, or other surface waters have occurred due to project related activities.

30. A monitoring program shall be implemented in accordance with Exhibit No. 4. The monitoring program shall extend for a period of 5 years with annual reports submitted to District staff. Vegetative targets for the wetland restoration area will be to achieve a minimum of 50% wetland vegetative cover in three (3) years and 80% wetland vegetative cover by the end of five (5) years. The percent coverages are considered to be 50% and 80% of the coverage as compared to the natural vegetative coverage present in the adjacent surrounding natural mangrove scrub/salt marsh wetland areas, not 50% and 80% of the 0.93 acre area in and of itself.

    If native wetland species do not achieve an 80% coverage by the end of five (5) years as identified above, the District may require that native species be planted in accordance with the maintenance program.

31. Silt screens, hay bales, turbidity screens/barriers or other such sediment control measures shall be utilized during construction. The selected sediment control measure shall be installed around all protected wetlands and surface waters in accordance with Exhibit No. 1. However, in order to eliminate potential scouring impacts to benthic wetland resources (i.e. seagrasses and hardbottom), no turbidity curtains will be utilized within areas that experience near-constant high velocity tidal currents (i.e. bridge areas). In addition, turbidity curtains will not be placed or anchored over/upon, or extend vertically all the way to the bottom, in areas of shallow seagrass beds.

32. The permittee shall comply with applicable state water quality standards including:
    a)62-302.500 - Minimum criteria for all surface waters at all places and all times;
    b)52-302.510 - Surface waters: general criteria
    c)62-302.560 - Class III waters; recreation, propagation and maintenance of a healthy, well balanced population of fish and wildlife;
    d)62-302.600 - Classified waters.

33. While in or over water work is being conducted, water quality monitoring for turbidity around the work site shall be performed in accordance with Exhibit 3.

34. Activities associated with the implementation of the wetland mitigation, monitoring and maintenance plan(s) shall be completed in accordance with the work schedule attached as Exhibit No. 7. Any deviation from these time frames will require prior approval from the District's Environmental Resource Compliance staff. Such requests must be made in writing and shall include (1) reason for the change, (2) proposed start/finish and/or completion dates; and (3) progress report on the status of the project development or mitigation effort.

35. Once all fill material is excavated from the mitigation restoration area, any remaining loose fill rubble material will be "raked" and also removed from the site.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
263 13th Avenue South
St. Petersburg, FL 33701

SEA TURTLE AND SMALLTOOTH SAWFISH CONSTRUCTION CONDITIONS

The permittee shall comply with the following protected species construction conditions:

a. The permittee shall instruct all personnel associated with the project of the potential presence of these species and the need to avoid collisions with sea turtles and smalltooth sawfish. All construction personnel are responsible for observing water-related activities for the presence of these species.

b. The permittee shall advise all construction personnel that there are civil and criminal penalties for harming, harassing, or killing sea turtles or smalltooth sawfish, which are protected under the Endangered Species Act of 1973.

c. Siltation barriers shall be made of material in which a sea turtle or smalltooth sawfish cannot become entangled, be properly secured, and be regularly monitored to avoid protected species entrapment. Barriers may not block sea turtle or smalltooth sawfish entry to or exit from designated critical habitat without prior agreement from the National Marine Fisheries Service's Protected Resources Division, St. Petersburg, Florida.

d. All vessels associated with the construction project shall operate at "no wake/idle" speeds at all times while in the construction area and while in water depths where the draft of the vessel provides less than a four-foot clearance from the bottom. All vessels will preferentially follow deep-water routes (e.g., marked channels) whenever possible.

e. If a sea turtle or smalltooth sawfish is seen within 100 yards of the active daily construction/dredging operation or vessel movement, all appropriate precautions shall be implemented to ensure its protection. These precautions shall include cessation of operation of any moving equipment closer than 50 feet of a sea turtle or smalltooth sawfish. Operation of any mechanical construction equipment shall cease immediately if a sea turtle or smalltooth sawfish is seen within a 50-ft radius of the equipment. Activities may not resume until the protected species has departed the project area of its own volition.

f. Any collision with and/or injury to a sea turtle or smalltooth sawfish shall be reported immediately to the National Marine Fisheries Service's Protected Resources Division (727-824-5312) and the local authorized sea turtle stranding/rescue organization.

Revised: February 21, 2006
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